>> HELLO, EVERYBODY.
WELCOME.
THE FIRST TIME YOU SEE IT IS
WHEN YOU SUBMIT IT AND WHEN WE
RELEASE IT BECAUSE THE QUESTIONS
ARE MODERATED, THEN EVERYBODY
ELSE WILL SEE IT.
SO JUST LETTING YOU KNOW THAT
THIS IS WHAT YOU CAN EXPECT TO
SEE.
WITHOUT FURTHER DELAY, I'M GOING
TO GO AHEAD AND START THE
RECORDING FOR TODAY'S SESSION.
AND I WOULD LIKE TO ASK OUR
HOST, KRISTIN LAYS OF HERITAGE
PRESERVATION TO GO AHEAD AND
BEGIN WHENEVER YOU'RE READY.
>> THANKS SO MUCH, MIKE.
WELCOME AGAIN TO CARING FOR
PHOTOGRAPHS.
I'M KRISTIN LAYS WITH HERITAGE
PRESERVATION IN WASHINGTON D.C.
I WANT TO THANKS MIKE AND
LEARNING TIMES FOR HELPING WITH
US THIS WEBINAR AND TO THE
INSTITUTE OF LIBRARY AND MUSEUM
SERVICES FOR MAKING THIS
POSSIBLE.
WE HAVE HEATHER BROWN HELPING US
TODAY, ANSWERING YOUR QUESTIONS.
SHE'S ONE OF DEBBY'S GRADUATE
STUDENTS AT THE ART CONSERVATION
PROGRAM AT THE UNIVERSITY OF
DELAWARE.
WE'RE GRATEFUL FOR HER HELP
TODAY.
TODAY'S WEBINAR WILL BE ABOUT
THE TECHNOLOGICAL DEVELOPMENT OF
PHOTOGRAPHY AND WE'LL CONTINUE
IT NEXT THURSDAY.
SO IT'S A TWO-PART SERIES.
IT'S SO IMPORTANT TO UNDERSTAND HOW PHOTOGRAPHS WERE MADE SO THAT YOU UNDERSTAND WHAT KIND OF DEGRADATION THEY MIGHT EXPERIENCE AND WHAT CONDITIONS THEY SHOULD BE KEPT IN.
WE JUST WANT TO ALERT YOU TO NEXT THURSDAY'S WEBINAR.
IT WILL BE AT A LATER TIME. 3 TO 4:30.
IN THE FINAL TWO WEBINARS WILL BE TUESDAY AND THURSDAY OF THE FOLLOWING WEEK.
I'M GOING TO GO OVER QUICKLY SOME THINGS BECAUSE DEBBY HAS A LOT TO PRESENT.
THE COURSE WEB PAGE IS WHERE YOU'LL FIND ALL THE INFORMATION WE ARE PRESENTING TO YOU.
AT EACH WEBINAR AIRS, WE'LL HAVE HANDOUTS, LINKS TO THE HOMEWORK ASSIGNMENT.
WE HAVE A GREAT LIST OF REFERENCES THAT DEBBY HAS PULLED TOGETHER FOR YOU.
THAT'S ALL THERE.
THEN AFTER EACH WEBINAR, WE'LL E-MAIL YOU THE LINKS.
IF YOU DON'T GET THE E-MAIL, LET US KNOW.
MAKE SURE WE'RE NOT ENDING UP IN YOUR SPAM FOLDER, TOO.
IF YOU'RE INTERESTED, YOU CAN WORK TOWARDS EARNING A CERTIFICATE IN DIGITAL CREDENTIAL.
YOU SHOULD HAVE REGISTERED SO WE KNOW WHO YOU ARE.
PLEASE BE IN TOUCH.
WATCH EACH WEBINAR IN THE COURSE EITHER LIVE OR IN THE RECORDING AND COMPLETE ALL FIVE HOMEWORK ASSIGNMENTS.
IF YOU DO WISH TO EARN A CERTIFICATE IN DIGITAL CREDENTIAL, YOU SHOULD HAVE EVERYTHING COMPLETED NO LATER
OF COURSE, I WANT TO REMIND YOU ABOUT THE ONLINE COMMUNITY, CONNECTING TO COLLECTIONS, THIS IS A GREAT PLACE TO HAVE LINKS TO ADDITIONAL RESOURCES AND NETWORK WITH EACH OTHER.

I'M GOING TO WELCOME BACK DEBBY IN A MINUTE.

HERE'S OUR INFORMATION ON HOW TO FIND US IF YOU NEED ANYTHING, HAVE ANY QUESTIONS ABOUT THE COURSE.

AND I WAS JUST GOING TO ASK A SERIES OF POLL QUESTIONS AT THIS POINT TO GIVE DEBBY A SENSE OF THE AUDIENCE AND THE TYPES OF PHOTOGRAPH COLLECTIONS YOU MIGHT HAVE.

WE'RE GOING TO START OFF WITH -- A TOUGH QUESTION.

GIVE A SENSE OF ABOUT HOW MANY PHOTOGRAPHIC MATERIALS YOU HAVE AT YOUR INSTITUTION.

SO EACH PRINT, EACH NEGATIVE, EACH SLIDE, EACH LANTERN SLIDE.

WE KNOW IT'S SO HARD TO MAKE AN ESTIMATE.

BUT JUST A BALLPARK TO GIVE US A SENSE OF THE SCOPE OF THE ISSUE THAT YOU'RE DEALING WITH.

MANY DON'T KNOW BECAUSE IT IS CHALLENGING.

SOMETIMES YOU HEAR THE SOUND CUT IN AND OUT A LITTLE BIT.

THAT'S JUST BECAUSE WE'RE USING VOICE OVER INTERNET.

IT'S A LITTLE LIKE A CELL PHONE IN THAT REGARD.

WE DO APOLOGIZE.

IF YOU'RE ON A WIRELESS NETWORK, SOMETIMES THERE'S ALSO A SLIGHT DELAY.

SO POSSIBLE TO CLOSE ALL THE OPEN PROGRAMS ON YOUR COMPUTER EXCEPT FOR YOUR INTERNET
BROWSER, SOMETIMES THAT HELPS. HOPEFULLY THE CLOSED CAPTIONING WILL KEEP YOU INFORMED IF THERE’S A BLIP OVER A KEY QUESTION.

A LOT OF PHOTOGRAPHS OUT THERE. WE'RE GLAD TO HELP YOU.

I'M GOING TO CLOSE THIS POLL.

DRAG IT AWAY.

AND THEN DEBBY TALKED A LITTLE BIT LAST TIME ABOUT SOME EARLY PHOTO PROCESSES. DAGUERREOTYPE AND TIN TYPES AND AMBROTYPES. IT HELPED THE AUDIENCE LEARN ABOUT -- HELP THEM IDENTIFY SOME OF THESE TYPES THEY MAY HAVE MISIDENTIFIED OR WEREN'T AS KNOWLEDGEABLE ON.

SO SHE WILL REVIEW THAT TODAY. WE WANTED TO GET A SENSE BEFORE TODAY’S LECTURE IF YOU HAD AN ESTIMATE.

OKAY.

GREAT.

CLOSE THAT.

LET ME BRING THIS BACK LATER.

AND THEN TODAY'S PRESENTATION WE'LL TALK A LOT ABOUT PRINTS. SOME OF THESE TERMS MAY NOT BE FAMILIAR TO YOU.

SO IF SO, DON'T WORRY ABOUT IT. DON'T KNOW IS A VERY VIABLE OPTION.

BUT SHE REFERENCED SOME OF THIS LAST TIME.

AGAIN, WE'RE GOING TO GO IN A LOT MORE DETAIL. JUST TRYING TO GET A SENSE OF THE GROUP AND WHAT WE MAY NOT HAVE IN YOUR COLLECTION.

OKAY.

THANK YOU SO MUCH.

I'M GOING TO CLOSE THIS AND DRAG IT AWAY.

WE MAY BRING THAT BACK LATER ON IN THE PRESENTATION.
OKAY.
AT THIS POINT, IT'S MY PLEASURE
TO WELCOME BACK DEBBY.
SHE IS THE CHAIR AT THE
UNIVERSITY OF DELAWARE'S ART
CONVERSATION PROGRAM AND AN
EXPERT IN PHOTO CONVERSATION AND
A GREAT ADVOCATE TO OUR FIELD.
WE'RE PLEASED THAT SHE'S WITH US
TODAY.
I'M GOING TO GO AHEAD AND CLOSE
THIS CHAT BOX HERE.
WE'RE GOING TO TURN IT OVER TO
MODERATED CHAT.
AS MIKE SAID, THIS MEANS THAT
YOUR QUESTION WILL BE SHOWN
TWICE.
ONCE WHEN YOU ASK IT AND ONCE
WHEN WE PUBLISH IT, UNLESS WE
RESPOND TO YOU PRIVATELY AND
YOU'RE WELCOME TO TELL US IF YOU
HAVE TECHNICAL CONCERNS.
DON'T BE SURPRISED IF YOU SEE
YOUR QUESTION TWICE.
WITH THAT, I'M GOING TO HAND
THINGS OVER TO DEBBIE.
>> I HOPE I'M COMING THROUGH
CLEARLY.
UH-OH.
HANG ON.
OKAY.
GOOD.
I'M READING MY -- MIKE IS SORT
OF LEADING US THROUGH THIS HAS
BEEN TERRIFIC.
I THINK I'M ON AND I THINK YOU
CAN HEAR ME AND I'M VERY HAPPY
TO BE BACK FOR THE SECOND
WEBINAR IN THIS SERIES.
AND AS KRISTIN DESCRIBED, THIS
WILL FOCUS MORE ON THE
TECHNOLOGY OF PHOTOGRAPHY AND
PARTICULARLY WITH THIS LECTURE,
I'M GOING TO BE TALKING ABOUT
PHOTOGRAPHIC PRINT MATERIALS.
ESPECIALLY SHOWS THAT ARE SILVER
BASED MATERIALS.
AGAIN, I DO LOVE THE BEATLES. ANOTHER BEATLES TITLE "THE LONG AND WINDING ROAD." FANTASTIC PORTRAITS HERE. BLACK AND WHITE SILVER GELATIN PORTRAITS AND THE WONDERFUL DYE TRANSFER PHOTOGRAPHS ON THE RIGHT. IF YOU THINK OF WHAT WE TALKED ABOUT ON TUESDAY, THE SILVER GELATIN PHOTOGRAPHS OF THE BEATLES ON THE LEFT. IN THIS CASE, THE FUNNEL IMAGE OF METALLIC SILVER. THE BINDER IS GELATIN. THEY'RE ON A PAPER SUPPORT. THE DYE TRANSFER PHOTOGRAPH ON YOUR RIGHT ARE COMPRISED OF CYAN, MAGENTA AND YELLOW. THERE'S NO SILVER AT ALL IN THESE PARTICULAR PHOTOGRAPHS. BUT ANYWAY, LET'S KEEP MOVING THROUGH THIS. I ALSO WANT TO THANK HEATHER BROWN WHO YOU SEE HERE WHO IS A SECOND-YEAR FELLOW IN OUR GRADUATE PROGRAM. OUR THREE-YEAR MASTERS LEVEL PROGRAM. SPONSORED BY THE UNIVERSITY OF DELAWARE. SHE WILL BE ONLINE AS GRETA DID ON TUESDAY ANSWERING QUESTIONS WHERE SHE CAN. I HOPE YOU FIND THIS HELPFUL AND I'M GRATEFUL TO GRETA. WHAT YOU SEE HERE, SHE'S TREATING A WONDERFUL SILVER GELATIN SEPIA TONE. I'M GOING TO GRAB THE POINTER AGAIN. IT'S A LITTLE BIT HARD TO SEE. IF YOU STUDY THIS PHOTOGRAPH, YOU CAN SEE HOW IT'S LIGHTER AT THE BOTTOM EDGE. WHEREAS VERY GRAY AND DISCOLORED THROUGHOUT.
IT TURNS OUT IN FACT THAT WAS DIRT AND DISCOLORATION. MOST LIKELY CAUSED BY SMOKING, NICOTINE. AND SHE WAS ABLE TO CAREFULLY REMOVE ALL OF THE DIRT AND GRIME FROM THE SURFACE OF THIS PROGRAM. SO THANK YOU, HEATHER FOR YOUR HELP. I APPRECIATE IT. MY GOAL IN ALL THIS -- THERE'S SO MUCH TO COVER AND SO MUCH TO TALK ABOUT. I THANK YOU FOR YOUR QUESTIONS AND THE HOMEWORK, WHICH HAS ALLOWED ME TO BROADEN THE SCOPE ON THIS PRESENTATION AS WELL. I WANT TO FOCUS ON RESOURCES. WE CAN ONLY BEGIN TO ADDRESS A BIT OF THESE TOPICS. BE SURE TO EXAMINE THE RESOURCES THAT ARE ONLINE, THE LINKS THAT HERITAGE PRESERVATION HAS PROVIDED AND THE MANY BOOKS THAT WE TALK ABOUT DURING WEBINAR 1, INCLUDING THESE TWO BOOKS. I HIGHLIGHT THESE PARTICULARLY TODAY BECAUSE THEY'RE RICH IN CONTENT IN TERMS OF THE VARIOUS PHOTOGRAPHIC PROCESSES, PARTICULARLY THE PHOTOGRAPHS OF THE PAST AND THE PRINT PROCESSES WE'LL BE DISCUSSING TODAY. WE TALKED TUESDAY AGAINST DAGUERREOTYPE, TINTYPES AND AMBROTYPES. THESE ARE MADE WITHOUT A NEGATIVE. YOU TAKE THAT LIGHT SENSITIVE SILVER PLATED COPPER SUPPORT IN THE CASE OF THE DAGUERREOTYPE HERE AND PLACE INTO IT THE CAMERA AND EXPOSE IT TO LIGHTNING. IN THAT WAY, THERE IS NOT A NEGATIVE.
WE CALL THESE DIRECT DEPOSITION
PROCESSES.
WE TALKED A BIT ABOUT THESE.
JUST TO REVIEW, MANY OF YOU
MENTIONED YOU DO HAVE THESE IN
YOUR COLLECTION.
THE DAGUERREOTYPE IS POPULAR
FROM 1840-1865 IN THE UNITED
STATES.
AGAIN, REMEMBER THIS IS A
PROCESS THAT IS ON SILVER PLATED
COPPER.
HIGHLY REFLECTIVE.
LOOKS LIKE A MIRROR.
AS IT’S IN YOUR HAND, MOVES FROM
A NEGATIVE TO A POSITIVE IMAGE.
THESE DAGUERREOTYPES ARE OFTEN
HOUSED IN PROTECTIVE CASES IN
THE UNITED STATES.
IN FRANCE AND EUROPE, YOU’LL
FIND FRAMED BEHIND A DECORATIVE
GLASS AND OFTEN HUNG ON THE
BALL.
THEY’RE NOT IN A FOLDED
MINIATURE CALLED AT ALL.
THEIR PRESENTATION CAN VARY
AROUND THE WORLD.
BUT THEY’RE GENERALLY PRONE TO
DETERIORATION ON THE OUTER EDGES
AS WE DISCUSSED TUESDAY.
IN COMPARISON, THE AM  --
AMBROTYPE, THAT YOU SEE HERE, IS
ON A GLASS SUPPORT.
IT’S NOT ON SILVER PLATED COPPER
AT ALL BUT ON GLASS.
IT HAS A VARNISHED LAYER.
THEY MAY OR MAY NOT BE HAND
COLORED, THIS IS A BEAUTIFUL
EXAMPLE OF AN AMBROTYPE IN
BEAUTIFUL CONDITION.
I MENTIONED THESE ARE
TECHNICALLY NEGATIVES BUT MADE
TO LOOK LIKE A POSITIVE.
IT’S A NEGATIVE IMAGE.
IT HAS A BLACK LACQUER LAYER TO
MAKE IT APPEAR AS A POSITIVE
IMAGE.
SOMEBODY ASKED LAST TUESDAY ABOUT FLAKING AND ISSUES ASSOCIATED WITH FLAKING OF AMBROTYPES. THIS IS HAPPEN AT THE OUTER EDGES BECAUSE YOU HAVE A BLACK LACQUER ON ONE SIDE OF THE GLASS. IN MANY CASES THEY ARE IN GOOD CONDITION BECAUSE THEY HAVE BEEN PROTECTED IN THESE CASES FROM AIR AND MOISTURE. AND THEN FINALLY, THE TINTYPE PROCESS THAT YOU SEE HERE, WHICH IS POPULAR IN THE UNITED STATES THROUGHOUT THE 19th CENTURY. OF COURSE, IN THIS SITUATION, THE SUPPORT IS ACTUALLY IRON. IRON THAT IS COATED ON BOTH SIDES WITH A BLACK LACQUER OR IN SOME CASES A BROWN LACQUER. FOR THE TINTYPE APPEARS MORE BROWN IN COLOR. BUT THE IMAGE IS SILVER. THE BINDER IS COLLODION. THESE ARE TYPICALLY VARNISHED AND OFTEN HAND COLORED AS YOU CAN SEE. HAND COLORED IN THE CHEEKS SLIGHTLY TO MAKE THESE IMAGES OR THESE INDIVIDUALS APPEAR MORE LIFE-LIKE. THE GREAT CHALLENGE WITH TINTYPES IS WHEN THEY’RE EXPOSED TO HIGH RELATIVE HUMIDITY CONDITIONS, THE IRON SUPPORT COULD RUST AND CORRODE. YOU CAN IMAGINE, THESE ARE LAMINATE STRUCTURES. SO I NEED YOU ALL TO SOMETIMES JUST SIT AND THINK FOR A SECOND. WHAT IS THE CROSS SECTION OF THIS OBJECT? YOU CAN IMAGINE THAT AS THE IRON BEGINS TO RUST AND CORRODE, IT WILL EFFECT THE COLLODION BINDER THAT SITS ON TOP OF IT CAUSING
FLAKING AND DETERIORATION.
SO THAT IS A REAL CATASTROPHIC
PROBLEM IF THE SUPPORT
DETERIORATES IN THAT WAY.
ONE THAT YOU TRY TO AVOID.
HOW DO YOU DO THAT THROUGH
STORAGE IN CONTROLLED
ENVIRONMENTAL CONDITIONS
WHEREVER POSSIBLE.
FOR THE MOST PART, WHEN YOU GO
BACK AND LOOK AT THE TINTYPES,
THEY'RE GENERALLY IN GOOD
CONDITION.
THEY MAY BE RUSTED AND CORR
ROWED AT THE OUTER EDGES, BUT
FOR THE MOST PART, THESE IMAGES
ARE FAIRLY PRISTINE.
THE VARNISHES MAY HAVE YELLOWED
A BIT.
THE VARNISHED LAYER DOES PROTECT
THE SILVER IMAGE FROM FADING AND
DISCOLORATION.
IT'S ALWAYS IMPORTANT WHEN YOU
THINK ABOUT THESE PROCESSES TO
IN YOUR MIND THINK ABOUT A TIME
LINE.
A TIME LINE OF POPULARITY.
IT CAN BEGIN TO HELP YOU
DISTINGUISH THE VARIOUS
PROCESSES.
IT'S IMPORTANT TO THINK ABOUT
WHEN THEY WERE MADE, WHEN THEY
WERE POPULAR, WHAT DID THEY LOOK
LIKE?
ALL OF THESE THINGS COMBINE.
IN THIS PARTICULAR TIMELINE, YOU
CAN SEE THE DAGUERREOTYPE, THE
AMBROTYPE AND THE TINTYPE AND
THEIR DATES OF POPULARITY.
THAT MAY HELP YOU ALONG WITH
MANY OTHER KEYS AND
CHARACTER TYPES THAT YOU'LL READ
ABOUT.
WE'LL TALK ABOUT WHEN YOU SHOULD
BEGIN TO CONSIDER REHOUSING
THESE COLLECTIONS, PERHAPS
STORING THEM IN COLLECTION BOXES
TO MITIGATE AGAINST ENVIRONMENTAL DAMAGE.
BUT THIS WEBINAR TODAY IS FOCUSED MORE ON IDENTIFICATION.
I CAN SEE THAT HEATHER HAS BEEN ANSWERING SOME OF YOUR QUESTIONS AS WE GO THROUGH.
WE'LL TAKE BREAKS HERE AND THERE.
BUT NOT YET, TO ADDRESS QUESTIONS AS THEY COME UP.
I WANT TO FOCUS HERE THOUGH ON PHOTOGRAPHIC PRINT MATERIALS, 19th AND 20th CENTURY.
I ASKED TUESDAY FOR YA'LL TO SEND IMAGES.
HERE'S ONE I RECEIVED FROM THE UNIVERSITY OF TEXAS SCHOOL OF LAW.
A WONDERFUL AM -- ALBUM.
THESE ARE ALBUMEN PRINTS.
AS YOU BEGIN TO TRY TO IDENTIFY PRINT MATERIALS AND MANY OF YOU IN IDENTIFYING PRESERVATION CHALLENGES AS PART OF YOUR HOMEWORK TALKED ABOUT THE DIFFICULTY YOU'RE ENCOUNTERING IN DIFFERENTIATING THESE DIFFERENT PROCESSES.
THAT'S WHAT I HOPE TO HELP YOU CAN TODAY.
AS YOU DO THAT, YOU NEED TO THINK ABOUT DATES OF POPULARITY AND, YOU KNOW, WHAT WAS POPULAR IN THE 19th VERSUS THE 20th CENTURY.
THESE PHOTOGRAPHS HERE -- I'M NOT LOOKING AT THE OBJECT -- TO ALL BE ALBUMEN PRINTS.
THEY'RE PRINTED OUT.
IF YOU REMEMBER TUESDAY, WE TALKED ABOUT THE DIFFERENCE BETWEEN PRINTING OUT AND DEVELOPING OUT IMAGES.
THESE PRINTED OUT IMAGES THAT TAKE LIGHT SENSITIVE PAPER, PLACING IT IN CONTACT WITH A
NEGATIVE AND ON TO THE SUN, ON TO THE IMAGE PRINTS OUT. THEY TEND TO BE BROWN IN COLOR. THESE HAVE FADED FAIRLY SIGNIFICANTLY. THEY'RE MORE YELLOW, WHICH IS A COMMON DETERIORATION PROBLEM WITH ALBUMEN PRINTS. A WONDERFUL ALBUM. WE'LL TALK ABOUT THE PRESERVATION OF ALBUMS DURING WEBINAR 4 OR 5. YOU CAN SEE THAT ALTHOUGH THEY'RE IN DIFFERENT STATES OF CONDITION, ALL OF THESE IMAGES ARE BROWNER IN COLOR. THEY'RE NOT TRULY BLACK AND WHITE. SO UNDERSTANDING WHEN PHOTOGRAPHS WERE POPULAR KNOWING THAT THE ALBUMEN PROCESS WAS INTRODUCED CAN HELP YOU IN BEGINNING TO IDENTIFIED VARIOUS PROCESSES. SO TIMELINE AND IDENTIFICATION IS IMPORTANT AS IS DETERIORATION. THIS IS A WONDERFUL IMAGE FROM THE METROPOLITAN MUSEUM OF ART. A RECENT EXHIBITION THAT THEY HAVE ON NOW CALLED FAKING IT, WHICH I RECOMMEND HIGHLY. IT WILL BE TRAVELLING TO OTHER MUSEUMS AS WELL. IT'S PREPHOTO SHopped AND HOW PHOTOGRAPHERS MANIPULATED IMAGES TO CREATE EFFECTS LIKE HERE. LOOKING AT PHOTOGRAPHS TO ASSESS THEIR DETERIORATION IN HELPING TO DETERMINE IF SOMEBODY IS AN ALBUMEN OR SILVER PHOTOGRAPH BECAUSE THESE MATERIALS DETERIORATE IN DIFFERENT WAYS. SO IDENTIFICATION, DETERIORATION. HERE'S ANOTHER EXAMPLE OF THE NELSON ATKINS MUSEUM OF ART.
AN ALBUMEN PHOTOGRAPH.
THERE’S EVIDENCE OF FADELING AND
DISCOLORATION, WHICH IS TYPICAL
OF SILVER IMAGES.
SO DETERIORATION PROBLEMS WILL
HELP YOU.
YOU’RE ALWAYS THINKING ABOUT
PRESERVATIONS GUIDELINES AND
PRIORITIES.
WE'RE GOING TO FOCUS ON IS THIS
ALBUMEN OR IS THIS GELATIN.
I WANT YOU TO THINK ABOUT THE
BIGGER ISSUES OF PRESERVATION.
THAT'S WHAT'S IMPORTANT.
IN THE END, TO BE HONEST, YOU’LL
HOUSE ALBUMEN PRINTS IN THE SAME
WAY USE HOUSE PAPER PRINTS.
WHEREAS IT'S NICE TO KNOW AND
IMPORTANT TO UNDERSTAND THESE
MATERIALS AND THEIR
TECHNOLOGIES, PRESERVATION
GUIDELINES AND PRIORITIES ARE BY
FAR THE MOST IMPORTANT TOPIC.
WHEN YOU'RE THINKING ABOUT
IDENTIFICATION, YOU THINK ABOUT
THE HISTORIC CALL, CONTEXTUAL
AND TECHNICAL.
THIS IS A MATTE PHOTOGRAPH.
PRIVATELY OWNED.
YOU CAN SEE IT MOUNTED ON A GRAY
CARD.
MATTE COLLODION PROCESSES
INTRODUCED AT THE TURN OF THE
19th CENTURY, IN THE MID TO
1890s AND POPULAR TO WORLD WAR
I.
THIS IS A SILVER-BASED PROCESS
THAT IS ACTUALLY TONED WITH GOLD
AND PLATINUM TO PRODUCE A VERY
PERMANENT PHOTOGRAPHIC PRINT
PROCESS THAT YOU’LL SEE HERE.
IT TENDS TO BE NEUTRAL IN COLOR.
ALMOST APPEARS BLACK AND WHITE.
IT'S A PRINTED OUT IMAGE.
The neutralaty has to done with
the print in gold and platinum.
in storms of historical and
CONTEXTUAL ISSUES, JUST SOME THINGS TO THINK ABOUT.
WHO IS THE PHOTOGRAPHER, DO YOU KNOW THEIR DATES AND WHEN THEY WORKED.
DO YOU HAVE A SENSE OF WHERE THIS OBJECT CAME FROM, CAN YOU DATE IT FROM THAT POINT OF VIEW.
THE CONTENT OF THE IMAGE.
WHO IS PICTURED IN THE IMAGE.
WHO IS THAT PERSON, WHEN THEY WERE BORN AND DIED.
DO YOU SEE CARS, DO YOU SEE BUILDINGS THAT YOU CAN DATE.
WHAT IS IT IN THE IMAGE ITSELF THAT MAY ALLOW YOU TO BEGIN TO DATE THAT OBJECT.
IS IT ON A CABINET CARD.
IS IT A STEREO VIEW?
THESE DIFFERENT FORMATS, SOME OF WHICH I'LL MENTION IN MORE DETAIL IN A MOMENT, CAN SOMETIMES BE DATED AS WELL.
ALL OF THESE CLUES CAN HELP YOU BEGIN TO DIFFERENTIATE WHEN MIGHT THIS OBJECT HAVE BEEN MADE.
THEREFORE YOU THINK, OKAY WHAT PROCESS WAS POPULAR DURING THAT TIME PERIOD.
HERE'S AN EXAMPLE OF AN ALBUMEN PRINT ON WHAT WE CALL A CABINET CARD.
SO THE CABINET CARD IS A FORMAT ABOUT 4 1/4 BY 6 1/2 INCHES.
THIS FORMAT WAS INTRODUCED IN THE 1850s, 1860s.
IN TERMS OF THE TECHNICAL, THINK ABOUT IMAGE QUALITY.
IMAGE COLOR.
SO IS THAT PHOTOGRAPH BROWN AND WHITE OR BLACK AND WHITE IN COLOR?
AND THAT MAY HOPE YOU TO DISTINGUISH VARIOUS PROCESSES.
WHAT IS THE TONALITY IN THE NONIMAGE AREA?
IS IT YELLOW OR WHITE?
THE ALBUMEN PROCESS HAS A TENDENCY TO YELLOW.
WHEN YOU LOOK AT A HIGHLIGHT IN AN ALBUMEN PRINT, IT MAY BE YELLOWED AND DETERIORATED.
A GELATIN, BLACK AN WHITE PHOTOGRAPH, IT DOESN'T TURN THAT WAY.
THE NONIMAGE COLOR IS SOMETHING THAT CAN HELP YOU AS WELL.
HERE IS -- THIS IS A NICE COMPARISON.
SO HERE YOU'RE USING A PAPER PRINT USING -- YOU CAN SEE HERE, FROM 1855.
THIS IS A PRINTED OUT IMAGE WHERE THE COLOR IS BROWN.
IT'S A PHOTOLYTIC SILVER IMAGE.
IN COMPARISON, THIS PHOTOGRAPH IS PLAQUE AND WHITE.
YOU CAN SEE THE DIFFERENT IN THE DARK AREAS AND THE NONIMAGE COLOR HERE, WHICH IS VERY WHITE AND BRIGHT.
ALSO YOU WANT TO LOOK AT SURFACE CHARACTERISTICS.
IS THE IMAGE GLOSSY OR MATTE.
ONE THING WE TALK ABOUT IN DIFFERENTIATING DIFFERENT PRINTING PROCESSES, WHETHER THEY ARE A ONE, TWO OR THREE LAYERED STRUCTURE.
ONE-LAYERED STRUCTURE IS SOMETHING LIKE THE SALTED PAPER PRINT, WHERE THE IMAGE MATERIAL IS EMBEDDED DIRECTLY IN THE PAPER SUPPORT.
I'M GOING TO GO BACK BECAUSE I CAN -- IN THIS CASE, WITH THE SALTED PAPER, THE SILVER I'LL MY KNOWLEDGE IS EMBEDDED IN THE PAPER SUPPORT.
THEM TEND TO BE MATTE, NOT GLOSSY.
THIS PHOTOGRAPH MAY BE AN EXCEPTION.
IT MAY HAVE A GLOSS. THAT COULD BE BECAUSE IT'S CODED WITH A VARNISH OF SOME KIND. FOR THE MOST PART, THE SALT PRINT, THE IMAGE IS EMBEDDED IN THE PAPER SUPPORT. WHEREAS, IN OTHER PHOTOGRAPHIC PROCESSES, YOU HAVE A BINDER SUCH AS ALBUMEN, COLLODION OR GELATIN. WE CALL THAT A TWO-LAYERED STRUCTURE. IN THAT CASE THE SURFACE WILL APPEAR MORE GLOSSY AND NOT AS MATTE. SO BEING ABLE TO DIFFERENTIATE THESE LAYERS AND WHAT IS PRESENT AND WHAT THE SURFACE CHARACTER LOOKS LIKE CAN ALSO HELP YOU TO DIFFERENTIATE ONE PROCESS FROM ANOTHER. FORMAT AND PRESENTATION AS WE MENTIONED EARLIER COULD ALSO HELP YOU, THE SILVER GELATIN PHOTOGRAPH THAT YOU SEE HERE, THEY'RE OFTEN UNMOUNTED. THE ALBUMEN PRINT IS MOUNTED BECAUSE IT HAS A Tendency TO CURL. OF COURSE, DETERIORATION CHARACTERISTICS. IS THE IMAGE FADING, WHICH IS CHARACTERISTIC OF A SILVER IMAGE. IS THERE CRACKING OF THE BINDING LAYER WHICH YOU MAY SEE WITH ALBUMEN, ET CETERA. SO HERE'S ACROSS SECTION OF OF SOME OF THE PHOTOGRAPHIC PROCESSES THAT WE'LL TALK ABOUT NOT IN GREAT DETAIL FOR ALL OF THEM. BUT YOU SEE WITH THIS TIMELINE, A SENSE OF THE CHRONOLOGY OF THESE VARIOUS PROCESSES, BEGINNING WITH THE SALTED PAPER PROCESS, WHICH YOU SEE HERE
INTRODUCED IN 1841.
HAVE A BIT OF A TECHNICAL
PROBLEM.
MY POINTER IS STUCK.
GOT IT.
THE SALTED PAPER PRINT THAT YOU
SEE HERE STARTING IN 1840s.
THE CYANOTYPE BECAME MORE
POPULAR BY THE END OF THE 19th
CENTURY.
THE ALBUMEN PRINT DOMINATES THE
19th CENTURY.
WE'LL TALK IN MORE DETAIL ABOUT
ALBUMEN BECAUSE MANY SAID YOU
HAD THIS IN YOUR COLLECTION.
THE TURN OF THE CENTURY, THINGS
TURN TRICKY WITH A VARIETY OF
DIFFERENT PROCESSES PRODUCED
INCLUDING SILVER GELATIN.
PRINTING OUT PAPER, WHICH YOU
SEE HERE AND A VARIETY OF PAPERS
MATTÉ AND GLOSSY THAT YOU SEE
HERE THAT ARE COMPRISED OF
COLLODION AS A BINDER.
ALSO THE TURN OF THE CENTURY, A
DIFFERENT PROCESS.
THE PLATINUM PRINT, WHICH WAS
USED BY FINE ART PHOTOGRAPHERS.
BUT AGAIN, THIS CARONOLOGY WILL
HELP YOU TO DIFFERENTIATE WHAT
IS IN YOUR COLLECTION.
YOU’LL SEE THOSE IN A DIFFERENT
OF PUBLICATIONS PRESENTED IN
MANY DIFFERENT WAYS, THIS IS THE
SAME INFORMATION FORMATTED IN A
DIFFERENT WAY.
THE TIME LINE OF POPULARITY.
ONE PROCESS THAT WAS NOT ON THE
EARLIER TIME LINE, WHICH YOU SEE
HERE, IS THE SILVER GELATIN
DEVELOPING OUT PROCESS, WHICH IS
PRESENT EVEN TODAY, BLACK AND
WHITE PHOTOGRAPHY.
SO STUDY THOSE.
WE DON'T HAVE TIME REALLY -- I
DON'T WANT TO GO INTO THIS IN
ENORMOUS DETAIL, BUT I WANT YOU
TO BE AWARE OF THE FACT THAT AS YOU'RE THINKING ABOUT IDENTIFICATION OF THE MATERIALS IN YOUR COLLECTION, THAT YOU THINK ABOUT WHAT PROCESSES MIGHT HAVE BEEN POPULAR AT DIDN'T TIME PERIODS.
THE OTHER THING TO RECOGNIZE IS MANY OF THE PHOTOGRAPHIC PRINTS IN YOUR COLLECTIONS ARE LIKELY TO BE SILVER BASED.
THEY'RE BASED ON THE LIGHT SENSITIVITY OF SILVER CHLORIDES AND SILVER IODIDE.
ALL OF THESE ARE BASED ON THE PROCESS OF THE SILVER HALIDES.
WITH THE PRINTING PROCESS THAT WE TALKED ABOUT TUESDAY, YOU TAKE THIS LIGHT SENSITIVE PAPER, SALTED PAPER, ALBUMEN, SILVER GELATIN, AND YOU PLACE IT IN CONTACT WITH A NEGATIVE AND OUT INTO THE SUN UNTIL THE IMAGE PRINTS OUT.
THEY TEND TO BE BROWNISH IN COLOR WHEN THEY'RE PRODUCED.
THE SILVER, IF YOU COULD LOOK AT IT UNDER HIGH MAGNIFICATION, WOULD BE ROUNDED IN SHAPE.
IT SCATTERED LIGHT AND APPEARS MORE BROWN IN COLOR.
WITH DEVELOPING OUT IMAGES, AS WE MENTIONED, YOU TAKE THAT LIGHT SENSITIVE PAPER AND YOU PLACE IT IN CONTACT -- WHAT HAPPENED?
THERE IT IS.
AND YOU ACTUALLY EXPOSE IT IN A DARK ROOM IN AN ENLARGER AND DEVELOP IT IN A CHEMICAL
DEVELOPER. SO THERE IS NO LIGHT. YOU END UP WITH AN IMAGE THAT IS MORE BLACK IN COLOR. A FINAL IMAGE MATERIAL KNOWN AS FILAMENTARY SILVER. THESE FILAMENTS THAT RESEMBLE STOOL WOOL. THE IMAGE APPEARS BLACK IN COLOR. BECAUSE THOSE FILAMENTS ABSORB LIGHT. BUT IN ALL CASES, WHETHER THESE IMAGES ARE PRODUCED THROUGH DEVELOPMENT OR PRINTING OUT, IN THE LIGHT, IN THE SUNLIGHT OR THROUGH CHEMICAL DEVELOPMENT, THEY MUST BE FIXED TO REMOVE THE RESIDUAL UNEXPOSED LIGHT SENSITIVE SILVER SALTS. SO ALL OF THESE PROCESSES, NO MATTER HOW THEY’RE PRODUCED ARE FIXED IN ONE WAY OR ANOTHER SO THEY’RE NO LONGER LIGHT SENSITIVE. SOMETIMES YOU’LL HEAR ABOUT FIXATION OR FIXING USING SOMETHING LIKE HYPO OR SODIUM SULFATE. FINALLY THESE MATERIALS MUST BE WASHED TO REMOVE THE RESIDUAL FIXING AGENT, WHATEVER THAT MIGHT BE. THIS IS SORT OF A BASIC UNDERSTANDING OF THESE MATERIALS, WHETHER THEY’RE SALTED PAPER PRINTS OR SILVER GELATIN DEVELOPING OUT. IT’S A CHANCE TO RECOGNIZE WHAT IS HAPPENING AS WE TALK ABOUT THESE PROCESSES IN A BIT MORE DETAIL. AND ALSO TO REFER BACK TO THE CROSS SECTION, WHICH I SHOWED YOU TUESDAY. THAT IS TO REMIND YOU THAT YOU DO HAVE THESE LAMINATE
Structures with photographic print materials that include paper supports that may or may not be -- that may or may not be coated with what we call baryta. It's a mixture of the white pigment combined with gelatin coated on the paper support, this is popular with photographic processes after 1880, 1890. Binder layer, which is coated on top of the paper or on top of the baryta layer and the final image material, which scattered light.

More importantly is to look at this in a real photograph. This is a silver gelatin printing out photograph that you see here and here. The primary support is paper. You can't see that. But under high magnification, you can see this white coating on the paper support. That's the baryta layer. On top of that is the gelatin binder layer, that you can sort of see here. It's folded over in the area that is damaged. The final image material is printed out silver. This is what we call a three layered structure. Because we have the paper support, the baryta layer and then the transparent binder layer.

So again, you might have a two layered structure a one layered structure or in this case a three layered structure when you're liking at various photographic printing processes. So let's -- what I think I'll
DO, LET ME TALK A BIT ABOUT
SALTED PAPER AND I'LL STOP AND
TAKE QUESTIONS.
LOOKS LIKE HEATHER HAS BEEN
ANSWERING QUESTIONS AS WE GO
THROUGH.
LET ME JUST START WITH THE
SALTED PAPER PROCESS, WHICH I'M
ONLY GOING TO ADDRESS BRIEFLY.
IT'S REALLY A BEAUTIFUL PROCESS.
MANY OF YOU WILL HAVE SOME OF
THOSE MATERIALS IN YOUR
COLLECTION.
YOU'RE UNLIKELY TO HAVE LARGE
COLLECTIONS OF SALTED PAPER
PRINTS.
ON THE OTHER HAND, IT'S AN
IMPORTANT PROCESS TO RECOGNIZE
BECAUSE IT'S ONE OF THE EARLIEST
PHOTOGRAPHIC PRINTING PROCESSES.
IT'S BASED ON THE LIGHT SENSITIVITY
OF SILVER HALIDES.
IN THIS CASE, SILVER CHLORIDE.
IT'S PRODUCED IN A RELATIVELY
SIMPLE WAY.
PHOTOGRAPHERS WOULD TAKE GOOD
QUALITY WRITING PAPER, 100% RAG
PAPER THAT IS MADE FROM COTTON
AND LINEN.
IT WAS TYPICALLY Sized WITH
GELATIN OR STARCH.
AND THEY WOULD IMMERSE THAT IN A
SOLUTION OF SODIUM CHLORIDE OR
TABLE SALT, WHICH IS WHERE THE
NAME COMES FROM, SALTED PAPER.
THE PAPER WOULD BE ALLOWED TO
DRY.
TO MAKE IT LIGHT SENSITIVE,
BECAUSE REMEMBER, THINKING BACK
TO THE SILVER-BASED PRINTING
PROCESSES, SORT OF BASIC
INFORMATION I PRESENTED, YOU
NEED SILVER HALIDES.
SO TO MAKE THE PAPER LIGHT
SENSITIVE, THE PHOTOGRAPHER
WOULD BRUSH IT WITH A SOLUTION
OF SILVER NITRATE FORMING LIGHT
SENSITIVE SILVER CHLORIDE IN THE
PAPER SUPPORT.
THE LIGHT SENSITIVE PAPER WOULD
BE PLACED IN CONTACT WITH A
NEGATIVE, WHICH MAY BE A
PAPER-BASED NEGATIVE OR A GLASS
PLATE NEGATIVE DEPENDING WHEN
THE PRINT WAS MADE.
PLACED INTO THE SUN AND UNTIL
THE IMAGE PRINTS OUT, REMOVED
FROM THE SUN AND FIXED AND
WASHED.
IN A NUTSHELL, THAT'S THE SALTED
PAPER PROCESS.
IT IS IMPORTANT TO SORT OF THINK
ABOUT IT AND TO UNDERSTAND HOW
THIS PROCESS IS MADE.
BECAUSE IT WILL HELP YOU TO
REALLY UNDERSTAND ALL OF THE
PRINTING OUT PROCESSES.
IN THIS IMAGE HERE, THIS
WONDERFUL IMAGE OF THE MOON,
FROM THE LIBRARY OF CONGRESS,
WHICH HAS A FANTASTIC COLLECTION
OF SALTED PAPER PRINTS, THERE'S
AN INTERESTING SURVEY OF SALTED
PAPER PRINTS BEING DONE NOW AT
HARVARD UNIVERSITY.
SO YOU MAY FIND MORE AND MORE
INFORMATION AS WE LEARN MORE AND
MORE ABOUT THE SALTED PAPER
PRINT FROM OUR COLLEAGUES AT
HARVARD.
BUT WHEN YOU LOOK AT SORT OF A
SCHEMATIC, WHICH YOU SEE HERE AT
THE SALTED PAPER PROCESS, YOU
HAVE A PAPER SUPPORT AND
EMBEDDED THE PAPER SUPPORT ARE
THOSE SILVER IMAGE PARTICLES,
WHICH ARE ACTUALLY PHOTOLYTIC
SILVER, SILVER PRODUCED BY LIGHT
BECAUSE THIS WAS A PRINTED-OUT
PROCESS.
THE IMAGE IS PHOTOLYTIC, THE
SUPPORT IS A COTTON RAG AND NO
BINDER.
IT'S A ONE LAYERED STRUCTURE.
SO THIS IS AN IMAGE OF HENRY TALBOT'S PRINTING ESTABLISHMENT IN THE U.K. AND I SHOWED THIS TO YOU. SO THIS IS WHERE MANY SALTED PAPER PRINTS ARE BEING MADE. JUST TO GET A SENSE OF HOW THIS IS DONE. THESE ARE THE PRINTING FRAMES IN THE SUN. THE ASSISTANT THAT MONITORING THE PRINTING. IT WAS VERY LABOR INTENSIVE. YOU HAD TO DETERMINE WHEN THE PRINT WAS COMPLETED, WHEN IT HAD BEEN EXPOSED TO LIGHT EXPOSURE APPROPRIATELY BEFORE IT WOULD BE FIXED AND WASHED. YOU CAN SEE THE PHOTOGRAPHERS AND EVERYBODY WORKING OUTSIDE AS WELL. SO THEN IMAGES HERE FROM MARK AUSTERMAN, SHOWING HISTORIC PHOTOGRAPHY AND THE MAKING OF A SALTED PAPER PRINT HERE. THE SALTED PAPER PRINT INTRODUCED IN 1841 POPULAR UNTIL 1860. THERE IS NO BINDER LAYER. THE IMAGE IS DIRECTLY EMBEDDED THE PAPER SUPPORT. THE IMAGE OF THE PHOTOLYTIC SILVER IMAGE IS BROWN IN COLOR, PRODUCED BY LIGHT THROUGH CONTACT PRINTING. IT CAN BE SORT OF A PURPLISH BROWN COLOR WHEN IT'S IN GOOD CONDITION. THE IMAGE CAN FADE. WHEN YOU LOOK AT THE OUTER EDGES, YOU CAN SEE VERY CHARACTERISTIC FADING OF THE OUTER EDGES AS THIS SILVER IMAGE IS EXPOSED TO POOR ENVIRONMENTAL CONDITIONS, OXIDATION. IT WILL BEGIN TO FADE. THE SILVER WILL CONVERT TO
SILVER SALTS.
THE SILVER SALTS NO LONGER
ABSORB AND SCATTER LIGHT AND YOU
GET THIS CHARACTERISTIC FADING
ON THE OUTER EDGES.
THE IMAGE MAY BE BERATED BECAUSE
THEY'RE SOFT AND SENSITIVE.
HEREN'T ANOTHER SILVER SALTS
PRINT.
SOMEONE ASKED IF SILVER SALTED
PRINTS WERE VARNISHED.
THAT'S A GREAT QUESTION.
IN FACT, MANY OF THEM WERE.
BECAUSE WHEN YOU VARNISHED THESE
IMAGES, YOU WOULD INCREASE THEIR
LOOMOSITY, INCREASE THEIR
DETAIL.
SO YOU WILL FIND SALTED PAPER
PRINTS THAT ARE COATED WITH A
VARIETY OF DIFFERENT VARNISHES
FROM SHELLAC TO NATURAL RESINS
OF ALL KINDS.
THESE VARNISHES MAY DETERIORATE
AND YELLOW.
I'M TELLING YOU, THE SALT PRINT
IS MATTE BECAUSE THE IMAGE IS
EMBEDDED THE PAPER SUPPORT.
COULD BE VARNISHED AND COATED.
YOU NEED TO STUDY THESE IMAGES
CAREFULLY AND DETERMINE WHETHER
I HAVE A VARNISH OR IF THAT IS A
BINDER LAYER AND WHAT AM I
SEEING.
SOMETIMES YOU CAN DISTINGUISH
VARNISHES BECAUSE THEY HAVE BEEN
COATED BY HAND.
THEY HAVE BEEN BRUSHED ON.
YOU'LL SEE BRUSH STROKES WHICH
YOU WON'T NECESSARILY SEE WITH
OTHER BINDER LAYERS.
SO LET ME JUST TAKE A BREAK AND
ASK KRISTEN IF THERE'S ANY
QUESTIONS COMING THROUGH THAT I
MIGHT RESPOND TO BEFORE WE MOVE
IN TO THE ALBUMEN PROCESS.
KRISTEN, BEFORE I TURN IT OVER,
CAN I TAKE IT BACK FOR A SECOND?
SURE.

I WANTED TO JUST SHOW THIS TO FINISH UP ON THE SALT PRINT. BECAUSE I FORGOT I ADDED THIS IN AT THE LAST MINUTE. THIS IS JUST DETAIL UNDER HIGH MAGNIFICATION OF THE SALTED PAPER PRINTS WHICH YOU SEE BEHIND IT. WHAT I WANTED TO SHOW YOU, WHEN YOU LOOK AT THESE IMAGES UNDER HIGH MAGNIFICATION, YOU'LL SEE THE PAPER FIBERS. THAT'S WHAT THIS IS HERE. AGAIN, SYMPTOMATIC OF A ONE-LAYERED STRUCTURE. IF YOU HAVE ACCESS TO HAND HELD MAGNIFIERS THAT ARE 30 OR 40 X, YOU CAN SEE THEM YOURSELVES. SO THIS IDENTIFICATION CAN BE HELPFUL TO YOU. AGAIN, WHY ARE YOU SEEING THE PAPER FIBERS? BECAUSE THIS IS A ONE LAYERED STRUCTURE WITH THE IMAGE MATERIAL EMBEDDED THE PAPER SUPPORT. OKAY.

KRISTEN, SORRY.

NO PROBLEM.

HEATHER HAS BEEN DOING A GREAT JOB ANSWERING A LOT OF THESE QUESTIONS. ONE THAT SHE WANTED YOUR INPUT ON HAD TO DO WITH POPULARITY OF THESE ITEMS. SO MARGARET HAD ASKED OF THE FOUR PROCESSES AT THE TURN OF THE CENTURY, WHAT WOULD HAVE BEEN THE CHEAPEST AND EASIEST FOR AN INDIVIDUAL TO USE AND WHAT WAS THE MOST POPULAR AROUND THE TURN OF THE CENTURY. THAT MIGHT MEAN IT DOMINATES -- THAT'S A GOOD QUESTION.

THE TURN OF THE CENTURY -- THE TURN OF THE 19th CENTURY.
WE'RE TALKING LATE 1890S THROUGH 1910 I IMAGINE.
THAT IS A TRICKY TIME FOR PROCESS IDENTIFICATION.
THERE ARE MANY PROCESSES THAT ARE AVAILABLE TO PHOTOGRAPHERS.
IT IS A LITTLE BIT HARD TO SAY WHAT WAS THE MOST POPULAR.
WE HAVE SOME PHOTOGRAPHERS THAT ARE STILL USING THE ALBUMEN PROCESS.
CERTAINLY YOU DO NOT SEE SALTED PAPER PRINTS.
SALTED PAPER PRINTS ARE POPULAR UNTIL ABOUT 1860s.
SAY THAT, I HESITATE, BECAUSE THERE ARE PHOTOGRAPHERS THAT SAID OH, LET'S DO SALT PRINTS.
FOR THE MOST PART, YOU DON'T SEE SALTED PAPER.
YOU MAY SEE SOME USING ALBUMEN.
I'D SAY THE MOST POPULAR PROCESS AND PROBABLY THE OTHER PRINTING-OUT PROCESSES, SILVER GELATIN PRINTING OUT PAPERS AND COLLODION CHLORIDE PRINTING OUT PAPERS BOTH MATTE AND GLOSSY.
BUT BY 1895, SILVER GELATIN BLACK AND WHITE PHOTOGRAPHY IS ALSO AVAILABLE.
IT DOESN'T REALLY BECOME POPULAR UNTIL 1910 OR SO.
BUT YOU CAN SEE A WIDE RANGE OF MATERIALS AT THIS TIME PERIOD.
SOME OF THIS WILL DEPEND ON WHERE YOU ARE IN THE WORLD.
AND ONE BOOK THAT I -- AND I SEE IT LOOKS LIKE ANGELICA HAS MENTIONED IT IRONICALLY AT THE SAME TIME THAT I WAS THINKING ABOUT IT, WHICH IS REALLY A WONDERFUL RESOURCE.
I WILL IMAGE -- BRING YOU AN IMAGE IN MY NEXT WEBINAR TO TAKE A LOOK AT IT.
IT'S A BOOK BY JIM RILEY ON 19th CENTURY PHOTOGRAPHIC PRINT
IT'S TRULY EXCELLENT ABOUT THESE VARIOUS PROCESSES, PARTICULARLY THOSE THAT DOMINATE THE 19th CENTURY BASED ON ITS TITLE. AND IT INCLUDES DETAILS ON HOW THEY WERE MADE, HOW TO IDENTIFY THEM. THERE'S A CHART IN THIS BOOK AS WELL. AND SO THAT COMBINED WITH A GRAPHIC ATLAS IN LOOKING AT THE TURN OF THE CENTURY WILL HELP YOU TO DIFFERENTIATE SOME OF THESE PROCESSES. THAT'S GREAT.

WE DID HAVE A QUESTION ABOUT THE SALT PROCESS. HOW LONG DID IT TAKE TO PRODUCE IN THE SUN AND WAS IT EVER DONE UNDER ARTIFICIAL FORMS OF LIGHT. OKAY. GOOD QUESTION. IT WAS -- ARTIFICIAL WASN'T AVAILABLE AT THE TIME THAT THE SALTED PAPER PRINTS WERE POPULAR. SO IT WAS DONE WITH THE SUN. THE LENGTH OF THE EXPOSURE VARIED BECAUSE IT DEPENDED ON THE SENSITIVITY OF THE PAPER AND THE TYPE OF NEGATIVE BEING USED. WAS IT A WAXED PAPER NEGATIVE, WHICH WAS POPULAR EARLY ON, THE BEGINNING OF THE SALTED PAPER PRINT OR AFTER 1851, WAS IT A WET PLAYED COLLODION NEGATIVE. IT'S HARD TO SAY. I'D SAY IN GENERAL, YOU PROBABLY ARE TALKING ABOUT LIGHT EXPOSE SLUR IN THE RANGE OF 15 TO 30 MINUTES. IT WASN'T REALLY AN ISSUE BECAUSE YOU JUST PUT THESE PHOTOGRAPHS IN PRINTING FRAMES AND ALLOWED THEM TO BE EXPOSED
TO LIGHT.
OF COURSE, IT HAD TO DO WITH THE
INTENSITY OF THE LIGHT AND THE
TIME OF YEAR.
PHOTOGRAPHERS BEGAN TO SORT OF
RECOGNIZE WHAT THEIR EXPOSURES
WOULD BE BASED ON THEIR OWN
EXPERIENCE.
THERE'S MANY, MANY VARIABLES.
PHOTOGRAPHY WAS DIFFICULT,
CHALLENGING AND, YOU KNOW, IT'S
IMPORTANT TO STEP BACK AND
RECOGNIZE THE AMOUNT OF TIME
THAT WENT INTO EVERY ONE OF
THESE IMAGES THAT WE'RE CARING
FOR TODAY.
>> ACTUALLY A GREAT FOLLOW UP
QUESTION FROM DENNIS ABOUT THESE
TYPES OF PHOTOGRAPHY.
WAS THIS A PROHIBITIVELY
EXPENSIVE AT THE TIME?
WOULD AMATEURS USE ONE TIME OVER
ANOTHER AT THIS TIME IN HISTORY?
>> THE SALTED PAPER PROCESS
WASN'T NECESSARILY -- IN THE
UNITED STATES, IT WAS EXPENSIVE.
IT WAS PATENTED.
YOU HAD TO PAY BY A LICENSING
FEE IN ORDER TO MAKE SALTED
PAPER PARENTS.
SO AMATEURS REALLY WERE NOT AS
INVOLVED IN PHOTOGRAPHY.
IN FACT, THEY REALLY WERE NOT
INVOLVED IN PHOTOGRAPHY UNTIL
LATER IN THE 19th CENTURY WHEN
IT WAS JUST A LITTLE BIT EASIER
TO DO AND YOU COULD BUY PAPER
THAT WAS ALREADY MANUFACTURED IN
LIGHT SENSITIVE SUCH AS SILVER
GELATIN PRINTING OUT PAPER.
BUT IT WASN'T, I DON'T THINK, AS
EXPENSIVE AS SOMETHING LIKE THE
DAGUERREOTYPE.
BUT CERTAINLY IT WAS NOT A
PROCESS THAT YOU WOULD FIND
AMATEURS WORKING WITH.
THERE WERE SCIENTISTS THAT MIGHT
HAVE BEEN EXPERIMENTING WITH THIS PROCESS AND DABBLING IN SALTED PAPER AND ALBUMEN PRINTS AS WELL.

BUT THE AMATEUR MARKETS BEGINS TO RATE LATE 19th CENTURY WITH THE INTRODUCTION OF OTHER PROCESSES.

I SHOULD KEEP GOING, KRISTEN.

>> SURE.

>> GIVEN THE TIME.

IT'S GETTING AWAY FROM US.

AND MOVE THROUGH ALBUMEN AT LEAST AND LET'S -- THEN OF COURSE HEATHER IT LOOKS LIKE IS ANSWERING QUESTIONS AND WE'LL TAKE ANOTHER BREAK OR SO.

I WANT TO BE SURE WE HAVE TIME AT THE END, WHICH MAY BE A CHALLENGE.

ANYWAY, IF YOU UNDERSTAND THE SALTED PAPER PRINTS, YOU'LL UNDERSTAND THE ALBUMEN PHOTOGRAPH.

THE ALBUMEN PHOTOGRAPH DOMINATED THE 19th CENTURY.

HERE'S TWO EXAMPLES HERE.

IN THIS CASE, ANOTHER EXAMPLE HERE FROM THE LIBRARY OF CONGRESS.

WHEN YOU LOOK AT THIS PORTRAIT OF ABRAHAM LINCOLN, YOU CAN BEGIN TO SEE SOME CHARACTERISTICS OF THE ALBUMEN PROCESS.

IT IS A PHOTOLYTIC SILVER IMAGE PRODUCED BY LIGHT.

THE IMAGE IS THERE FOR BROWN IN COLOR.

IT'S NOT BLACK IN WHITE.

THESE ROUNDED PARTICLES OF SILVER THAT SCATTER LIGHT.

THE BINDER IS EGG WHITE OR ALBUMEN.

THIS BINDER TENDS TO YELLOW OVER TIME.

YOU DON'T SEE BRIGHT WHITE
HIGHLIGHTS BUT RATHER THE HIGHLIGHTS WERE MORE YELLOW BECAUSE OF THE DETERIORATION OF THE EGG WHITE BINDER LAYER. THE IMAGE TENDS TO FADE. BOTH OF THESE IMAGES ARE SOMEWHAT FADED. IF YOU COULD LOOK AT THIS PHOTOGRAPH UNDER HIGHER MAGNIFICATION, YOU MIGHT SEE CRACKING, WHICH IS A COMMON PROBLEM WITH ALBUMEN. AS THE EGG WHITE EXPANDS AND CONTRACTS DIFFERENTLY.

THERE’S ALL KINDS OF WONDERFUL VIDEOS AND MOVIES ONLINE THAT SHOW YOU HOW ALBUMEN PRINTS ARE MADE. I’VE DONE A FEW SCREEN SHOTS FROM THIS PARTICULAR VIDEO. I MENTIONED THESE IN MY DISCUSSION TUESDAY. THEY’RE WONDERFUL IN SHOWING YOU HOW THESE MATERIALS ARE MADE. TO MAKE AN ALBUMEN PRINT, YOU TAKE THE WHITE OF HEN’S EGGS, WHICH YOU SEE HERE. THAT WOULD BE BEATEN UP TO A FROTHE TO HOMODOGINEZE. AND THEN TO MAKE A PAPER LIGHT SENSITIVE, YOU’D TAKE THE ALBUMENIZED PAPER, PAPER COATED WITH EGG WHITE AND FLOAT IT ON A SOLUTION OF SILVER NITRATE FORMING LIGHT SENSITIVE SILVER CHLORIDE, MOST LIKELY IN THE ALBUMEN BINDER LAYER. THAT LIGHT SENSITIVE PAPER WOULD BE ALLOWED TO DRY, PLACED IN CONTACT WITH A NEGATIVE AND PLACED INTO THE SUN UNTIL THE IMAGE BEGINS TO PRINTED OUT. AGAIN, THE IMAGE I SHOWED YOU EARLIER OF THE PHOTOGRAPHS PRINTING OUT.

YOU CAN EXPECT THE EXTENT OF PRINTING BY CAREFULLY LIFTING UP
THE IMAGE TO SEE.
IN THIS CASE, YOU CAN SEE THE
ALBUMEN PRINT, WHICH IS PRINTING
OUT FOLLOWING EXPOSURE TO LIGHT.
THE PHOTOGRAPH WOULD BE FIXED
AND WASHED.
AFTER 1854, I'D SAY THIS IS PART
OF THE PROCESS.
THIS PHOTOGRAPH WOULD BE
GOLD-TONED AS WELL.
SO THE PROCESS REALLY IS THAT
YOU EXPOSE THIS VIDEO, THE
ALBUMEN PRINT TO LIGHT, YOU THEN
GOLD TONE IT, FIX IT AND WASH
IT.
SO THESE IMAGES ARE
TRADITIONALLY GOLD TONED.
GOLD TONING WOULD INCREASE
THE -- IMPROVE THE COLOR AND
CERTAINLY INCREASE THE
PERMANENCE AS WELL.
SO ALBUMEN IN VERY GOOD
CONDITION TEND TO HAVE A
BEAUTIFUL PURPLISH BROWN
TONALITY.
HERE'S ANOTHER SCHEMATIC THAT
SORT OF BEGINS SILVER PRINTING
OUT PAPERS AND ALBUMEN PRINTS IN
PARTICULAR.
YOU TAKE THE LIGHT SENSITIVE
PAPER.
PLACE IT IN CONTACT WITH A
NEGATIVE.
YOU TONE IT IN A GOLD TONER OF
SOME KIND.
YOU THEN FIX IT TO REMOVE THE
UNEXPOSED LIGHT SENSITIVE SILVER
HALIDES AND WASH IT.
UNDER VERY HIGH MAGNIFICATION,
40000 X, YOU'LL SEE THESE TINY
LITTLE PARTICLES OF SILVER
METAL.
The rounded particles that
scatter and the image appears
brown in color.
SO THE ALBUMEN PROCESS IS MADE
BY TAKING THIS ALBUMENIZED
PAPER, MAKING IT LIGHT
SENSITIVE, EXPOSING IT TO LIGHT
AND FIXING IT AND WASHING IT.
THE PAPER TENDS TO BE VERY GOOD
QUALITY BUT VERY THIN, TENDS TO
CURL.
FOR THAT REASON, MOST ALBUMEN
PRINTS WERE MOUNTED IN SOME WAY.
SO YOU MAY HEAR REFERENCE TO
SOMETHING CALLED THE CART DE
VISITES, WHICH REFERS TO A
FORMAT WHICH IS ABOUT 2 1/2 BY
4 1/4 IMAGES.
THESE ARE ALL MOUNTED.
A CART DEVISETES ARE MATTE
COLLODION PROCESSES.
SO BE VERY CAREFUL ABOUT
DISTINGUISHING THE FORMAT FROM
THE PROCESS.
ON THE OTHER HAND, IN THE UNITED
STATES, I WOULD SAY THAT 95% OF
THE CART DE VISITES ARE LIKELY
TO BE ALBUMEN PRINTS.
THIS IS BECAUSE THE CART DE
VISITES WAS IN THE HEY DAY OF
PRINTING.
YOU CAN SEE THESE ARE ALL BROWN
IN COLOR.
THEY HAVE ALL YELLOWED
HIGHLIGHTS.
THE DETERIORATION OF THE EGG
WHITE BINDER LAYER.
SOME ARE FADED AT THE OUTER
EDGES, WHICH IS TYPICAL.
AND BUT THEY'RE GENERALLY IN
GOOD CONDITION.
ANOTHER FORMAT THAT YOU MAY FIND
IN YOUR COLLECTION THAT IS
POPULAR WITH THE ALBUMEN
PROCESS, BUT YOU'LL SEE THIS
FORMAT INTO THE 20th CENTURY AS
WELL IS THE CABINET CARD, WHICH
IS SLIGHTLY LARGER IN THIS CASE.
PROBABLY 4 1/4 BY 6 1/2 INCHES.
THESE ARE TWO ALBUMEN PRINTS
MOUNTED ON TO THIS CABINET CARD.
SO YOU WANT TO THINK ABOUT
FORMAT AND THINK ABOUT PROCESS SIMULTANEOUSLY.
ANOTHER EXAMPLE HERE OF AN ALBUMEN PHOTOGRAPH FROM THE LIBRARY OF CONTINUE IN RELATIVELY GOOD CONDITION WITH SOME FADING, CERTAINLY AT THE OUTER EDGES.
BUT THE CABINET CARD REFERS TO THE FORMAT AND THE SIZE OF THE MOUNT.
WHEN YOU LOOK AT THE ALBUMEN PRINT IN CROSS SECTION, WHAT YOU’LL SEE HERE IS A TWO LAYERED STRUCTURE.
YOU HAVE A GOOD QUALITY, 100% RAG, THIN PAPER SUPPORT.
COATED WITH TRANSPARENT ALBUMEN OR EGG WHITE BINDER.
THE IMAGE MATERIAL IS THIS SILVER, THESE ROUNDED PARTICLES OF SILVER METAL THAT ARE TONED WITH GOLD.
SO YOU HAVE A GOLD TONED SILVER IMAGE, AN EGG WHITE BINDER AND A GOOD QUALITY PAPER SUPPORT.
THE PROCESS DOMINATES AS WE SAID MANY TIMES.
IT’S WORTH REPEATING.
THE 19th CENTURY.
WHEN WE DID THE POLL AT THE BEGINNING OF THIS LECTURE MANY OF YOU SAID YOU HAD ALBUMEN PRINTS, WHICH IS NOT THE LEAST BIT SURPRISING BECAUSE THEY’RE SO COMMON.
AND AGAIN, IT’S AN EGG WHITE BINDER ON A THIN PAPER TYPICALLY MOUNTED, TYPICALLY GOLD TONED WITH THIS PURPLISH BROWN IMAGE AND YELLOWED HIGHLIGHTS.
THE HIGHLIGHTS ARE YELLOWING BECAUSE OF THE DETERIORATION OF THE SILVER IMAGE AND THE DETERIORATION OF THE ALBUMEN BINDER.
THE EGG WHITE DOES TEND TO CRACK
AND CRAZE OVER TIME.
UNDER HIGH MAGNIFICATION, YOU'LL
SEE THE HIGH CHARACTERISTIC
CRACKING.
I WANT TO SHOW YOU ANOTHER
PROBLEM IN 19th CENTURY
PHOTOGRAPHY.
WE DO TEND TO SEE FADING OF THE
HIGHLIGHTS.
THE HIGHLIGHTS LOSE THEIR DETAIL
FAIRLY RAPIDLY.
THIS IS BECAUSE OF THE SILVER
IMAGE IN THOSE AREAS IS VERY
SMALL AND VERY PRONE TO FADING
AND DETERIORATION.
ONE OF THE FIRST AREAS WE LOSE
DETAIL IS IN AREAS OF HIGHLIGHTS
LIKE CHRISSENING DRESSES LIKE
YOU SEE HERE.
THIS IS AN EXAMPLE OF THAT
CRACKING THAT I TALKED ABOUT,
WHICH IS CHARACTERISTIC OF THE
ALBUMEN PROCESS.
AS THE EGG WHITE EXPANDS AND
CONTRACTS DIFFERENTLY FROM THE
PAPER SUPPORT, YOU GET THIS
CHARACTERISTIC CRACKING, WHICH
YOU WILL NOT NECESSARILY SEE IN
SOMETHING LIKE A BLACK AND WHITE
SILVER GELATIN PHOTOGRAPH.
AGAIN, THERE ARE ALL KINDS OF
RESOURCES.
THROUGH THE IPI IMAGE PERMANENT
INSTITUTE WEBSITE, YOU CAN
PURCHASE A BOOK THAT WAS WRITTEN
MANY YEARS AGO AND HAS BEEN
UPDATED ON JIM RILEY ON ALBUMEN
AND SALTED PAPER PRINTS.
THIS IS A GREAT BOOK ON HOW THEY
WERE MANUFACTURED, HOW THEY WERE
MOUNTED, THE DIFFERENT MOUNTS
USED AND HOW THEY DETERIORATE
OVER TIME.
I RECOMMEND THIS CERTAINLY.
AGAIN, AN AWFUL LOT OF
INFORMATION THAT WE'RE TALKING
ABOUT CAN BE FOUND ON THE
GRAPHICS ATLAS.
KEEP REFERRING BACK TO THESE VARIOUS RESOURCES.
I WISH WE HAD HOURS AND HOURS AND WE COULD TALK FOR HOURS AND HOURS ABOUT THE ALBUMEN PROCESS. BUT IT'S NICE TO KNOW THAT THERE IS AN ENORMOUS AMOUNT OF INFORMATION OUT THERE THAT I THINK YOU WILL FIND VERY HELPFUL.
BUT IN THE BACK OF YOUR MIND, I'VE GONE BACK TO REMIND YOU AGAIN, THE ALBUMEN PROCESS HAS THIS BROWN AND WHITE COLOR. THIS PARTICULAR ALBUMEN PRINT IS NOT IN PARTICULARLY GREAT SHAPE. IT'S YELLOWED, FADED. THERE'S LOSS OF HIGHLIGHT DETAIL. IT HAS SURFACE DIRT AND DETERIORATION AS WELL. IT IS CHARACTERISTIC OF THE ALBUMEN PRINT.
I AM GOING TO JUST INTRODUCE A COUPLE OF PROCESSES. I WANT TO MOVE TO SILVER GELATIN DEVELOPING NOW. THAT'S THE OTHER PROCESS THAT YOU IDENTIFIED AND THE ONE THAT IS MOST COMMON IN YOUR COLLECTIONS.
SOMEONE ASKED EARLIER, WHAT DOMINATED THE TURN OF THE CENTURY. THIS IS WHERE WE GET INTO THESE OTHER PROCESSES.
ONE IS SILVER GELATIN PRINTING OUT PAPERS, WHICH YOU SEE HERE. THESE WERE INTRODUCED IN THE 1880s, LATE 1880s AND POPULAR UNTIL 1940.
WHAT IS DIFFERENT HERE, PHOTOGRAPHERS WOULD BUY THIS PAPER ALREADY MANUFACTURED. THEY NO LONGER HAD TO SENSITIZE THEM TO LIGHT.
THEY DIDN'T HAVE TO DEAL WITH IMMERGING THINGS AND SILVER NITRATE.
WHEN YOU BOUGHT TYPICALLY WITH THE ALBUMEN PROCESS, A PHOTOGRAPHER WOULD PURCHASE ALBUMENIZED PAPER MANUFACTURED IN EUROPE.
HE OR SHE WOULD HAVE TO FLOAT IT ON SILVER NITRATE TO PRODUCE LIGHT SENSITIVE SILVER CHLORIDE. THAT WAS CUMBERSOME AND DIFFICULT AND TIME CONSUMING AND PROBLEMATIC.
WITH THE INTRODUCTION OF PRINTING OUT PAPERS, THESE WERE MADE BY MACHINE.
GOOD QUALITY PAPER WAS COATED WITH A GELATIN EMULSION.
PHOTOGRAPHERS WOULD BUY THIS LIGHT SENSITIVE PAPER, PLACE IT IN CONTACT WITH A NEGATIVE OUT INTO THE SUN SO IT'S STILL PRINTED OUT.
YOU STILL HAVE THE CHARACTERISTIC PRINTING OUT COLOR THAT YOU SEE HERE.
THESE IMAGES ARE NOT BLACK AND WHITE.
THEY ARE TRADITIONALLY TONED WITH GOLD, FIXED AND WASHED.
BUT THE WAY THEY PRODUCED IS VERY DIFFERENT AND THE WAY THAT THE PHOTOGRAPHERS COULD NOW BEGIN TO PURCHASE THESE MATERIALS.
THE OTHER DIFFERENCE WITH THE SILVER GELATIN PRINTING OUT PAPER IS FOR THE MOST PART, THESE ARE THREE LAYERED STRUCTURES.
YOU CAN ALMOST IMAGINE THAT THE SURFACE QUALITY IS MUCH GLOSSIER.
BECAUSE IN THIS CASE, THE PAPER IS COATED WITH THE BRIGHTER LAYER.
THE WHITE PIGMENT BARIUM SULFATE 
AND GELATIN COATED ON THE PAPER 
SUPPORT.
SO YOU CAN GET A SURFACE THAT IS 
MUCH GLOSSIER BECAUSE YOU NO 
LONGER SEE THE PAPER FIBERS. 
THEY'RE HIDDEN.
IT'S LIKE ICING A CAKE.
WITH THE ALBUMEN PRINT, YOU 
STILL HAVE THE PAPER FIBERS THAT 
ARE VISIBLE.
YOU'RE LOOKING THROUGH THE -- 
[ AUDIO DIFFICULTIES ]
AND UNDER HIGH MAGNIFICATION,
YOU SEE HOW YOU DON'T SEE ANY 
PAPER FIBERS. 
IT'S VERY SMOOTH, VERY GLOSSY. 
ONE THING YOU DO SEE WITH THESE 
PHOTOGRAPHS THOUGH, IF YOU LOOK
AT THEM CAREFULLY, IS 
RETOUCHING. 
THIS IS RETOUCHING IN THE EYE
AND ALSO IN THIS CASE ON THE 
EYEBROW TO MAKE THESE 
INDIVIDUALS LOOK A BIT MORE 
LIFE-LIKE.
IT'S NOT SOMETHING YOU'LL NOTICE 
RIGHT AWAY.
IN MANY CASES THERE'S A LITTLE 
PIGMENT APPLIED TO THE EYES AND 
SOMETIMES TO THE CHEEKS AS WELL. 
WE ALSO HAVE ANOTHER PROCESS 
THAT IS POPULAR AT THE TURN OF 
19th CENTURY, COLLODION CHLORIDE 
PAPERS MATTE AND GLOSSY. 
COLLODION REFERS TO THE FACT 
THAT IN THE CASE THE BINDER 
LAYER IS COLLODION OR CELLULOSE 
NITRATE.
THESE TWO ARE MANUFACTURED SO 
YOU'D BY COLLODION OR GELATIN 
PAPERS.
THEY'RE PRINTED OUT. 
THE COLLODION PROCESS IS 
TYPICALLY TONED WITH GOLD AND 
PLATINUM. 
THESE IMAGES APPEAR MORE NEUTRAL
IN COLOR.
THEY SOMETIMES CAN BE OFTEN
CONFUSED WITH BLACK AND WHITE,
SILVER GELATIN PAPERS.
THEY TEND TO BE IN EXCELLENT
CONDITION.
THESE ARE BOTH BEAUTIFUL BECAUSE
OF THE TONING OF GOLD AND
PLATINUM.
LOOK AT THIS PICTURE OF THE
BABY.
YOU CAN SEE EVIDENCE OF
ABRASION.
THESE BECAUSE COLLODION AS A
MATERIAL IS BRITTLE.
IT DOES ABRZE QUITE EASILY.
FOR THE MOST PART, IF YOU HAVE A
PHOTOGRAPH AND THEY -- HERE'S
ANOTHER TIP.
THEY'RE SOMETIMES MOUNTED ON NOT
NEUTRAL, BUT RATHER GRAY MOUNTS.
I THINK THIS HAS TO DO WITH THE
FACT THAT THEY LOOK BETTER ON
THE GRAY MOUNTS.
SO YOU HAVE PHOTOGRAPHS IN YOUR
COLLECTION FROM THE TURN OF THE
CENTURY THAT ARE NEUTRAL IN
COLOR, MOUNTED ON A GRAY MOUNT,
THEY COULD BE MATTE COLLODION AS
YOU SEE HERE.
THERE'S -- THIS IS WHERE IT
BECOMES VERY CONFUSING.
SO STAY WITH ME.
DON'T DESPERE.
THERE'S ALSO GLOSSY PAPERS THAT
WERE MADE WITH COLLODION AS YOU
SEE HERE.
THIS IS A COLLODION BINDER
LAYER, A SILVER IMAGE ON A
BRIGHTER COATED PAPER SUPPORT
THAT HAVE A VERY HIGH GLOSS,
VERY SIMILAR TO SILVER GELATIN
PRINTING OUT PAPERS.
SOMETIMES THEY ADDED DYES TO THE
COLLODION TO PRODUCE IMAGES THAT
WERE VERY BLUE OR PURPLISH BLUE
OR MAGENTA IN COLOR AS YOU SEE
IN THIS PHOTOGRAPH ON A YOUR RIGHT.
THIS IN FACT WAS COMMON FOR THOSE OF YOU TUNING IN FROM EASTERN EUROPE, FROM RUSSIA, FROM THAT PART OF THE WORLD, THESE TINTED COLLODION CHLORIDE PAPERS WERE VERY POPULAR AND COMMON. NOT AS COMMON IN THE UNITED STATES, BUT YOU WILL STILL SEE THEM IN YOUR COLLECTIONS. YOU'LL SEE THEM AROUND THE WORLD.
ONE THING THAT DISTINGUISHES BOTH OF THESE PHOTOGRAPHS THEY'RE IN VERY GOOD CONDITION. THE COLLODION BINDER LAYER PROTECTS THE SILVER IMAGE. UNLIKE A GELATIN MATERIAL WHICH CAN EXPAND AND ABSORB MOISTURE, BECOME TACKY AND STICKY. COLLODION DOESN'T RESPOND IN THAT WAY. IT'S A FORM OF CELLULOSE NITRATE, THIS IS THE SAME MATERIAL THAT WE ENCOUNTERED IN AMBER TYPES AND TINTYPES. SO THESE ARE COLLODION CHLORIDE GLOSSY PAPERS THAT WERE VERY POPULAR AT THE TURN OF THE CENTURY.
NOW, THE OTHER PROCESS THAT I WANT TO TALK ABOUT AND THEN I PROMISED TO TAKE TIME FOR QUESTIONS, BUT I WANT TO BE SURE TO ADDRESS THIS, SILVER GELATIN BLOCKING OUT.
WHEN YOU RESPONDED TO THE POLLS, MANY SAID YOU HAVE ALBUMEN PRINTS AND WE HAVE SILVER GELATIN DEVELOPING OUT PHOTOGRAPHS. THE OTHER DAY SOMEONE ASKED WHETHER SILVER GELATIN OR GELATIN SILVER. CAN IT BE EITHER.
PEOPLE USE BOTH. I WISH IT WAS MORE STANDARD BUT IT'S NOT.
SILVER GELATIN REFERS TO THE FACT THAT THESE PHOTOGRAPHS WERE PRODUCED THROUGH DEVELOPMENT IN A DARK ROOM, NOT BY LIGHT.
YOU CAN SEE HERE, TOO, PHOTOGRAPHS IN GOOD CONDITION. THIS IS IN EXCELLENT CONDITION. THIS PHOTOGRAPH IS MUCH MORE FADED YELLOWED AND DETERIORATED, WHICH IS TYPICAL OF SOME OF THE DETERIORATION PROBLEMS THAT WE SEE WITH BLACK AND WHITE PHOTOGRAPHY.
ONE OF THE MAIN PROBLEMS THAT YOU SEE HERE IN THESE SILVER GELATIN DEVELOPING OUT PHOTOGRAPHS IS MIRRORMING. SO WITH THE PHOTOGRAPH ON THE RIGHT, YOU CAN SEE WHERE THE IMAGE IS ACTUALLY DETERIORATED IN THOSE AREAS THAT WERE PROBABLY EXPOSED TO A POOR QUALITY MATTE OF SOME KIND. THE CENTER AREA WAS PROTECTED. THIS AREA WAS PLACED IN CONTACT WITH THIS POOR QUALITY MATTE CAUSING THIS SILVER IMAGE TO DETERIORATE OR WHAT WE CALL MIRROR, THIS IS A MIGRATION OF THE SILVER IN THE PHOTOGRAPH. IT IS DEPOSITED ON THE TOP SURFACE AS YOU SEE AT THE BOTTOM EDGE.
A COMMON PROBLEM WITH SILVER GELATIN DEVELOPED OUT PHOTOGRAPHS.
AGAIN, JUST A REMINDER OF SORT OF WHERE WE ARE AT THIS POINT. WE'RE NOW INTO THE 20th CENTURY, THIS BLACK AND WHITE DEVELOPED OUT PAPERS THAT BEGIN TO BE POPULAR BY 1905 THAT ARE CERTAINLY POPULAR INTO THE 1960s
WHEN THEY'RE REPLACED WITH COLOR PHOTOGRAPHY.
YOU CAN SEE THE SHIFT IN COLOR,
I HOPE.
THE PHOTOLYTIC SILVER IMAGES
THAT ARE BROWNER COLOR AND HERE
WE ARE AT THE TURN OF THE 19th
CENTURY AND 20th CENTURY WITH
BLACK AND WHITE IMAGES.
THE SILVER GELATIN DEVELOPED OUT
PROCESS.
AND HERE IS ANOTHER COMPARISON
PRINTED OUT VERSUS DEVELOPED
OUT.
PRINTED OUT PRODUCED BY PLACING
PAPER IN CONTACT WITH THE
NEGATIVE OUT INTO THE SUN.
THE SILVER GELATIN DEVELOPING
OUT PAPER PRODUCED IN THE DARK
ROOM.
BOTH PHOTOGRAPHS IN THIS CASE IN
VERY GOOD CONDITION.
SO A SCHEMATIC HERE IS YOU TAKE
THAT LIGHT SENSITIVE PAPER, YOU
EXPOSE IT TO LIGHT AND ENLARGE
IT.
IMMERSE IT.
IN A CHEMICAL DEVELOPER, YOU'RE
WORKING IN A DARK ROOM AND FIX
WITH IT SODIUM SULFATE TO REMOVE
THE SEWED YOU'LL HALIDES AND
WASH IT.
THESE ARE NOT TONED.
TONING IS COMMON WITH PRINTED
OUT IMAGES OR NOT NECESSARILY
WITH THE DEVELOPED OUT IMAGE.
ONE THING I WANTED TO BE SURE
YOU SAW IS THE SIZE AND
MORPHOLOGY AND SHAPE OF THIS
SILVER IMAGE.
THESE CLUMPS OF SILVER THAT
ABSORB LIGHT.
THE IMAGE APPEARS BLACK AND
WHITE.
IN CROSS SECTION, AGAIN, YOU'VE
GOT A GOOD QUALITY PAPER SUPPORT
OF SOME KIND COATED WITH BARYTA
AND A GELATIN COATING IN A BLACK AND WHITE IMAGE THAT WE'VE SEEN. WONDERFUL RESOURCE IS THIS GUIDE TO FIBER BASED GELATIN SILVER PRINT MATERIALS. THIS IS LISTED IN THE RESOURCES. IT'S AVAILABLE ONLINE. GOWAN HAS ADDRESSED MANY ISSUES ASSOCIATED WITH THE APPEARANCE AND DETERIORATION AND PRESERVATION OF THESE BLACK AND WHITE SILVER GELATIN PAPERS, WHICH CAN BE VERY DIFFERENT IN THEIR SURFACE QUALITY AND CHARACTERIZATION. THERE'S CONSIDERABLE WORK BEING DONE BY GOWAN, THE MUSEUM OF MODERN ART, THE IMAGE PERMANENCE INSTITUTE AND MANY OTHERS TRYING TO CHARACTERIZE THE SURFACE OF THESE SILVER GELATIN PAPERS BECAUSE THEY CAN BE GLOSSY, MATTE, BE TEXTURED. IN YOUR COLLECTION YOU'LL SEE EXAMPLES OF DIFFERENT MATERIALS. NOTES ON PHOTOGRAPHS WHICH I MENTIONED BEFORE, HAS EXTENSIVE MATERIAL IN BLACK AND WHITE PAPERS. PAUL MESSIER WHO WORKS IN BOSTON, MASSACHUSETTS HAS ASSEMBLED A LARGE COLLECTION OF SILVER GELATIN DEVELOPING OUT PAPERS THAT ARE BEING STUDIED TO BEGIN TO CHARACTERIZE THEIR SURFACES AND UNDERSTAND THEIR MANUFACTURER. MUCH OF THIS INFORMATION IS ONLINE ON HIS WEBSITE. IF YOU'RE INTERESTED IN LEARNING MORE ABOUT 20th CENTURY BLACK AND WHITE PHOTOGRAPHY, THIS IS ANOTHER RESOURCE THAT YOU MAY WANT TO REFER TO. THIS IS JUST FROM PAUL ACTUALLY. GET A SENSE OF THE VARIOUS PAPERS THAT HE'S BEEN PURCHASING
AND STUDYING ALL THE DIFFERENT TEXTURES. THIS HAS BEEN VERY IMPORTANT TO US IN THE FIELD OF PHOTOGRAPH CONSERVATION AS WE BEGIN TO CHARACTERIZE THE KINDS OF PAPERS, THE VARIOUS PHOTOGRAPHERS USED DURING THEIR LIFETIME. THE QUALITY, THE FIBER CONTENT, THE THICKNESS OF THE BARYTA LAYER, ET CETERA. THERE'S A LOT OF WORK IN THIS AREA. IN YOUR CASE, WHAT IS IMPORTANT -- HERE'S A GREAT PHOTOGRAPH OF PAUL McCARTNEY, OF COURSE. JUST TO THINK BRIEFLY WHAT IS THIS DEVELOPED PHOTOGRAPH. IT'S MADE THROUGH CHEMICAL DEVELOPMENT. THE DEVELOPMENT IS STOPPED, FIXED AND WASHED. YOU END UP WITH THIS IMAGE THAT IS WHEN IT'S IN GOOD CONDITION IN BLACK AND WHITE. AS YOU SEE HERE, AGAIN, IT'S PRODUCED THROUGH CHEMICAL DEVELOPMENT AS OPPOSED TO PRINTING OUT. SO YOU CAN REALLY BEGIN TO DIFFERENTIATE IN YOUR COLLECTION THESE DIFFERENT MATERIALS. THE DEVELOPED OUT IMAGE IS BLACK IN COLOR. THE FILAMENTARY SILVER IMAGE AS COMPARED TO THE PRINTED OUT BROWNER IMAGE. IN THIS CASE, BOTH IMAGES ARE IN GOOD CONDITION. YOU DO BEGIN TO SEE THE MIRRORING AT THE OUTER EDGES, WHICH IS CHARACTERISTIC OF PAPERS EXPOSED TO POOR CONDITIONS. UNFORTUNATELY, THE SILVER IMAGES
DO DETERIORATE.
IN THIS SCHEMATIC FROM GOWAN,
WHAT IS HAPPENING IS THESE
FILAMENT BUNDLES, THEY'RE
EXPOSED TO POOR ENVIRONMENTAL
CONDITIONS WITH THE INTRUSION OF
AIR AND MOISTURE, POOR QUALITY
ENCLOSURES.
THEY BEGIN TO BREAK UP AND BEGIN
TO DISASSOCIATE.
AS THEY DO, THE IMAGE CONVERTS
FROM SOMETHING THAT IS BLACK AND
WHITE TO SOMETHING THAT IS
BROWNER IN COLOR.
IT NO LONGER ABSORBS LIGHT AS
EFFECTIVELY AND THE IMAGE
APPEARS FADED AND DISCOLORED.
SO THAT'S WHAT IS HAPPENING WITH
MANY OF YOU BLACK AND WHITE
PHOTOGRAPHS THAT APPEAR BROWN.
IT'S ACTUALLY A DETERIORATION OF
THE SILVER IMAGE.
SOME OF YOUR BLACK AND WHITE
PHOTOGRAPHS MAY INTENTIONALLY BE
BROWNED OR SEPIA TONED.
THIS WAS COMMON IN THE 20s AND
30s.
WHERE BLACK AND WHITE IMAGE WAS
INTENTIONALLY TONED WITH SULFUR
TO PRODUCE A SILVER SULFIDE
IMAGE, WHICH IS USUALLY IN VERY,
VERY GOOD CONDITION.
AND THEY ARE AGAIN POPULAR
DURING THAT TIME PERIOD.
THEY'RE TECHNICALLY SILVER
GELATIN DEVELOPING OUT.
THEY WERE OFTEN HAND COLORED.
HERES ANOTHER ONE OF THESE GREAT
POSTCARDS OF A SEPIA TONED
SILVER IMAGE THAT MAY BE HAND
COLORED OR PRINTED.
BUT THE SULFUR TONING ALLOWED
FOR THE HAND COLORING.
YOU WEREN'T COMPETING WITH A
BLACK AND WHITE IMAGE.
SO THIS PROCESS THEN DOMINATES
THE BEGINNING OF THE 19th
CENTURY, THE PAPER TENDS TO BE COATED WITH BARYTA. THE SURFACE CAN VARY. MAY BE GLOSSY OR VERY MATTE. DEPENDING ON THE THICKNESS OF THE BARYTA LAYER. THERE'S A SILVER IMAGE EMBEDDED IN A GELATIN BINDER. YOU'LL SEE IMAGE FADING AND SILVER MIRRORING. HERE'S MORE EXAMPLES OF SOMewhat FADED DETERIORATED AND BLACK AND WHITE. THE IMAGE APPEARS BLACK IN THE DARK AREAS. SILVER GELATIN DEVELOPED OUT PHOTOGRAPH WITH THIS CHARACTERISTIC MIRRORING. ALSO YOU CAN EVEN SEE THE CHARACTERISTIC SURFACE QUALITY OF THIS PHOTOGRAPH, WHICH HAS MORE OF A TEXTURE ADD -- TEXTURED APPEARANCE, WHICH WAS PART OF THE PROCESS. SOME OF THESE PHOTOGRAPHS HERE TAKE ON SORTS OF A GREENISH YELLOW APPEARANCE THAT YOU SEE HERE. AND THE SILVER MIRRORING, AGAIN, WHICH IS VERY COMMON WITH THESE PHOTOGRAPHS FROM THIS TIME PERIOD. SOMEONE SUBMITTED THIS UNIVERSITY OF TEXAS SCHOOL OF LAW WEDNESDAY. I WANTED TO SHOW YOU HERE, THIS IS A BLACK AND WHITE SILVER IMAGE. >> IT LOOKS VERY PECULIAR. IT'S BEEN RETOUCHEd So IT WOULD BE REPHOTOGRAPHED FOR A MAGAZINE OR FOR PUBLICATION PURPOSES. IN YOUR COLLECTIONS, YOU'LL SEE PHOTOGRAPHS RETOUCHEd TO BE EXHIBITED. OTHERS THAT ARE EXTENSIVELY RETOUCHEd BECAUSE THEY'RE GOING
TO BE REPHOTOGRAPHED AND PRINTED IN MAGAZINES AND NEWSPAPER ARTICLES AS WELL. SO THAT’S WHAT IS GOING ON WITH THIS PARTICULAR PRINT. THESE -- THE BOTTOM LINE WITH THESE BLACK AND WHITE SILVER IMAGES, THEY DETERIORATE. IT’S TRUE WITH ALL SILVER IMAGES. ALBUMEN, SALTED PAPER, GELATIN AS WELL. THE FADING CAN CAUSED BY POOR QUALITY ENCLOSURES THAT CAUSE THESE SILVER IMAGES TO CHANGE. AS YOU SEE HERE, TO CONVERT TO SILVER IONS, SILVER PLUS. AND THE SILVER IONS FORM SILVER COMPOUNDS THAT DO NOT ABSORB AND SCATTER LIGHT AS EFFECTIVELY AS SILVER SULFIDE AND THE IMAGES APPEAR FADED AND DISCOLORED, WHICH IS TRUE IN ALL OF THESE COLORS. THEY APPEAR GREENISH AND YELLOW IN COLOR. SOME IS FROM POOR ENVIRONMENTAL CONDITIONS. IN OTHER CASES, IT MAY BE IMPROPER PROCESSING, IMPROPER FIXING AND WASHING. YOU’LL SEE WITH ALL THESE SILVER IMAGES FADING AND DISCOLORATION, SILVER MIRRORING, WHICH IS A MIGRATION. YOU CAN SEE IS SILVER MIRRORING WHEREVER YOU HAVE SILVER AND A BINDER LAYER OF SOME KIND. IT’S MUCH COME MORE WITH SILVER GELATIN PAPERS. AND FINALLY YELLLOWING. YOU BEGIN TO FORM SILVER SULFIDE, WHICH IS YELLOW IN COLOR OR BROWN IN COLOR. SO YOU START TO SEE WITH YOUR PHOTOGRAPHIC COLLECTIONS AND MANY OF YOUR IN YOUR HOME TALKED
ABOUT SILVER IMAGE DETERIORATION AS ONE OF THE CHALLENGES. YOU START TO SEE THE MIRRORING AND YELLOWING. THE WAY TO MITIGATE IS PROPER STORAGE, CONTROLLED ENVIRONMENTAL CONDITIONS THAT WILL SLOW DOWN THE RATE OF DETERIORATION OF THE IMAGE >> WHETHER IT'S PHOTOLYTIC OR FILAMENTARY IN SHAPE.

AND I WANT TO -- THEN I'M GOING TO OPEN THIS UP FOR MORE QUESTIONS AND TRY AND HELP THOSE OF YOU THAT MAY BE CONFUSED. IT IS CONFUSING. THERE'S SO MANY PHOTOGRAPHIC PROCESSES OUT THERE. I THINK IT'S REALLY IMPORTANT FOR YA'LL TO JUST HAVE A BIT OF A HANDLE ON THE SILVER BRACED PROCESSES AND NOT WORRY SO MUCH ABOUT THE NONSILVER PRINT MATERIALS THAT YOU SEE LISTED HERE.

BY NONSILVER, THIS REFERS TO THE FACT THAT THERE'S A WHOLE HOST OF PHOTOGRAPHIC PRINTING PROCESSES THAT ARE BASED ON THE LIGHT SENSITIVITY OF OTHER MATERIALS SUCH AS BICHROMAICS. YOU CAN USE THESE MATERIALS, CYANOTYPES OR PLATINOTYPES. THE ONES THAT ARE MOST COMMON ARE THE CYANOTYPE, WHICH IS A BLUEPRINT, WHICH IS EASY TO IDENTIFY BASED ON THE COLOR. POPULAR THROUGHOUT THE 19th CENTURY. BASED ON THE LIGHT SENSITIVITY OF IRON SALTS WITH THE FINAL IMAGE MATERIAL BEING THE BLUE PIGMENT.

AND THESE MATERIALS, 1 OF THE GREATEST PROBLEMS WITH CYANOTYPES, THEY FADE SOMETIMES IN THE LIGHT.
YOU HAVE TO BE CAREFUL WITH LIGHT EXPOSURE.
BUT FOR THE MOST PART, THEY TEND TO BE IN RELATIVELY GOOD CONDITION.
BUT THERE'S NO SILVER HERE.
SO YOU'RE NOT DEALING WITH THE KIND OF FADING THAT WE'VE SEEN WITH THE ALBUMEN PRINTS OR THE SILVER GELATIN DEVELOPING OUT PHOTOGRAPHS.
AND THEN FINALLY, THE PLATINOTYPE IS ANOTHER PROCESS THAT WE'RE NOT GOING TO ADDRESS IN DETAIL.
I JUST MENTIONED IT HERE AS A NONSILVER PROCESS.
THE FINAL IMAGE MATERIAL IN THIS CASE IS METALLIC PLATINUM EMBEDDED IN A PAPER SUPPORT BASED ON THE LIGHT SENSITIVITY OF IRON SALTS.
ONE THING THAT YOU SEE HAPPENING HERE, THIS PAPER WAS IN CONTACT WITH THE PLATINUM PROCESS. YOU CAN SEE A TRANSFER IMAGE.
AND THIS IS BECAUSE PLATINUM IS A CATALYST FOR CELLULOSE DETERIORATION.
SO IN THE DARK AREAS, IT'S CAUSED THE PAPER SUPPORT TO DETERIORATE.
YOU MIGHT SEE THIS IN PHOTOGRAPHIC ALBUMS SOMETIMES WHERE THIS IMAGE TRANSFER CAN BE CAUSED BY INKS AS WELL.
BUT IN THIS CASE, IT'S CAUSED BY CONTACT WITH THAT PLATINUM METAL.
BUT WHEREAS PLATTS -- PLATINUM IS A PERMANENT MATERIAL, IT DOESN'T FADE OR CORRODE LIKE SILVER.
FOR THAT REASON, THESE PLATINUM PRINTS TEND TO BE IN GOOD CONDITION.
YOU WON'T SEE MIRRORING OR
FADING.
YOU MAY SEE PAPER DETERIORATION
BECAUSE IT CATALYZE THAT
DETERIORATION.
BECAUSE IT'S BASED ON THE LIGHT
SINCE -- SENSITIVITY OF IRON
SALTS.
HERE'S A WONDERFUL PLATINUM
PRINT.
I MENTIONED THAT GRETA HAD DONE
RESEARCH ON THESE AS A SECOND
YEAR STUDENT.
IT'S IN GREAT SHAPE
>> IT'S A NEUTRAL COLOR, WHICH
IS TYPICAL OF THE PLATINUM
PRINT.
IT MAY BE A LITTLE YELLOWED AND
FADED IN THE PAPER SUPPORT.
BUT THE IMAGE HAS NOT
DETERIORATED IN A WAY THAT THE
SILVER GELATIN DEVELOPING OUT OR
THE ALBUMEN PRINT HAS.
UNDER MAGNIFICATION, YOU WILL
SEE PAPER FIBERS AS YOU DO WITH
THE SALT PRINTED.
THINKING BACK TO THE CROSS
SECTION.
THIS IS A ONE LAYERED STRUCTURE.
IN THE PLATINUM PRINTED, THE
FINAL IMAGE IS ACTUALLY EMBEDDED
THE PAPER SUPPORT.
SO WITH THAT, I HAVE A FEW MORE
SLIDES BUT I'M GOING TO TAKE A
BREAK BECAUSE THESE ARE MORE OF
A REVIEW.
THAT'S SORT OF A WHIRLWIND.
BUT THE MOST IMPORTANT POINTS
HERE ARE TO JUST STEP AWAY AND
RECOGNIZE THAT THERE'S A WIDE
VARIETY OF PHOTOGRAPHIC PRINTING
PROCESSES THAT ARE AVAILABLE
THAT ARE PRESENT IN YOUR
COLLECTIONS.
PROBABLY MOST OF THEM ARE SILVER
BASED.
YOUR PHOTOGRAPHS FROM THE 19th
CENTURY ARE MOST LIKELY PRINTED
OUT SILVER IMAGES, PROBABLY
ALBUMEN PRINTS
>> MAY BE SALT PRINTS, IF
THEY'RE EARLIER.
THEM MAY BE SILVER GELATIN
PRINTING OUT OR CHLORINE COATED
PRINTED OUT IF THEY'RE TURN OF
20th CENTURY, THE SILVER BASED
PROCESSES TENDED TO BE.
BUT IN ALL CASES, THEY'RE PRONE
TO DETERIORATION, FADE, 
MIRRORS.
THEY CAN BE CONTROLLED BUT
PROPER STORAGE AND ENVIRONMENT.
LET ME TURN THIS OVER TO YOU,
KRISTEN FOR A FEW QUESTIONS THAT
MAY HAVE COME UP.
I DO WANT TO COME BACK TO THE
SORT OF REVIEW AT THE END.
>> OKAY.
WE HAVE SO MANY.
I KNOW HEATHER IS WORKING TO
ANSWER THEM AS WELL.
SOME OF THE MORE STRAIGHTFORWARD
QUESTIONS SHE'S DOING A GREAT
JOB ON.
WE WANT A CLARIFICATION ON 
TERMINOLOGY THAT ILKA HAD.
THE DIFFERENCE BETWEEN
PROCESSING AND FORMAT.
HEATHER, EXPLAIN THAT.
The reason ILKA BROUGHT THAT UP,
IN A CATALOG DESCRIPTION, IT
SHOULD BE IMPORTANT TO INDICATE
PHOTO PROCESS AS WELL AS FORMAT.
SO AN EXAMPLE WOULD BE THAT THE
IT'S -- THIS PROCESS ON A CARD
OR --
>> YEAH.
YEAH.
YOU KNOW, AGAIN -- GOSH, I WISH
I HAD YOU ALL ON IN A ROOM AND
WE COULD LOCK THE DOORS AND HAVE
LOTS OF TIME.
PROCESS REFERS TO HOW THE
PHOTOGRAPH WAS MADE.
AN ALBUMEN PRINT, SILVER GELATIN DEVELOPING.
FORMAT IS MORE ABOUT THE SIZE.
SOME OF THESE FORMATS ARE STANDARD LIKE STEREO VIEW.
MANY ARE NOT.
IN TERMS OF CATALOGING, IT'S UP TO THE INSTITUTION.
IT'S VERY IMPORTANT WHERE YOU CAN IDENTIFY PROCESS AND FORMAT IS JUST ADDITIONAL INFORMATION THAT CAN BE MOST HELPFUL.
MANY INSTITUTIONS RATHER THAN IDENTIFYING THE FORMAT IF THEY'RE UNCERTAIN, THEY PROVIDE THE DIMENSIONS.
THERE ARE THROUGHOUT THE HISTORY OF PHOTOGRAPHY A VARIETY OF FORMATS THAT WERE POPULAR AT DIFFERENT TIMES.
SOME ARE PAPER BASED.
SOME REFER TO PHOTOGRAPHIC BUTTONS.
SO THERE'S A WIDE RANGE OF FORMATS OUT THERE.
PROCESS IS THE MOST IMPORTANT WAY TO IDENTIFY SOMETHING THROUGH CATALOGING.
>> GREAT.
KIND OF A HUMOROUS QUESTION THAT COME UP ABOUT ALBUMEN PRINTS.
IF YOU WERE TO WORK ON A RESTORATION OF AN ALBUMEN PRINT, YOU'D USE EGG WHITES, RIGHT? GET A 19th CENTURY HERITAGE BREED EGG TO DO THAT?
[LAUGHTER]
ACTUALLY, IF YOU ARE BEING -- YOU PROBABLY ARE UNLIKELY TO USE EGG WHITE IN ANY WAY.
BUT IF YOU'RE TRYING TO DUPLICATE A 19th CENTURY PROCESS, WHICH IS PROBABLY WHAT WE'RE REFERRING TO HERE, THAT'S A GREAT QUESTION.
ACTUALLY IF YOU SPEAK TO THOSE -- LIKE MARK AUSTERMAN AND
OTHERS THAT ARE PRODUCING ALBUMEN PRINTS TODAY, THEY CAN SPEAK WITH GREAT AUTHORITY ABOUT THE VARIOUS KINDS OF EGGS THAT WORK AND OTHERS THAT DON'T, WHETHER THEY'RE ORGANIC OR NOT. IT CAN BE CHALLENGING BECAUSE THE EGGS ARE VERY DIFFERENT. THE OTHER INTERESTING AND SORT OF FUN PART OF ALL THIS IS WHAT DO YOU DO WITH THE YOLKS. YOU CAN IMagine WHEN THEY ARE PRODUCING REAMS AND REAMS OF ALBUMENIZED PAPER IN WHAT IS NOW BELGIUM, THE OTHER PARTS OF EUROPE. THERE'S A MAJOR CHALLENGE WHAT TO DO WITH THE YOLKS. IT'S A VERY GOOD QUESTION. IT IS ACTUALLY AN ISSUE AND A PROBLEM. SOMETIMES WHEN YOU MAKE ALBUMEN PRINTS, USING HISTORIC TECHNIQUES, YOU'LL RUN INTO PROBLEMS DEPENDING ON THE EGGS YOU'RE USING. >> AND WE HAD A QUESTION ABOUT -- I'M NOT SURE I'M GETTING AT WHAT SHE'S SAYING. IT CROSSED MY MIND. IS THERE ANY ISSUE WITH THE FACT THAT THAT'S AN ANIMAL PRODUCT? IS THERE ANY SORT OF -- >> NO. YOU KNOW, THAT'S A GOOD QUESTION IN TERMS OF INTEGRATED POST MANAGEMENT. NOT THAT I'M AWARE OF. THE BIGGER -- NOT SO MUCH. THE ALBUMEN IS FERMENTED. IT'S A VERY THIN LAYER. THE BIGGER ISSUE ARE THESE GELATIN PRINTS THAT ARE -- YOU KNOW, THEY ARE NUTRIENT FROM MOLD. MOLD IS YOUR CHALLENGE. BUT NOT SO MUCH THE FACT THAT
THIS IS AN ANIMAL PRODUCT.
>> OKAY.
NUMBER OF QUESTIONS THAT ARE GETTING INTO SORT OF THE TREATMENT QUESTIONS.
AND HEATHER HAS BEEN HANDLING THEM WELL.
I WANT TO RUN THROUGH A FEW.
SO HEATHER TAKING NICOTINE OFF OF A PHOTOGRAPH.
I GUESS THAT'S A COMMON PROBLEM BUT MOST MUSEUM PROFESSIONALS SHOULD NOT UNDERTAKE THEMSELVES. THAT'S WORK FOR A CONSERVATOR TO DO.
CORRECT?
>> YES.
THIS IS INCREDIBLY COMPLEX.
YOU CAN ONLY IMAGINE, YOU THINK OF THE CROSS SECTION, THE VARIOUS PROCESSES THAT WE JUST RAN THROUGH TODAY.
THERE'S SO MANY MORE OUT THERE.
SO FIRST, YOU KNOW, YOU NEED TO BE CERTAIN THAT YOU KNOW WHAT THE PROCESS IS.
WHETHER YOU'RE DEALING WITH A GELATIN COLLODION OR ALBUMEN BINDER LAYER AND THE CONDITION CERTAINLY DICTATES HOW IT MIGHT RESPOND TO VARIOUS CONVERSATION TREATMENT PROCEDURES.
A LOT OF THIS HAS TO BE TESTED UNDER THE MICROSCOPE.
YOU HAVE TO UNDERSTAND THE BINDER AND WHAT THE SENSITIVITY IS.
SO WHEN YOU'RE INVOLVED IN DOING SOMETHING LIKE REMOVING NICOTINE FROM A SUS, YOU HAVE TO IDENTIFY A TECHNIQUE THAT WILL SAFELY REMOVE THAT PRODUCT, WHATEVER IT MIGHT BE, WITHOUT DAMAGING THE BINDER LAYER OR THE IMAGE MATERIAL.
IT REQUIRES A LOT OF STUDY OF THE PARAGRAPH THAT HEATHER
CLEANED SO BEAUTIFULLY.
THAT WAS HOURS AND HOURS OF WORK
UNDER THE MICROSCOPE TO BE SURE
THAT SHE COULD SAFELY REMOVE THE
NICOTINE AND THE DIRT AND
DISCOLORATION FROM THE SURFACE
WITHOUT ADVERSELY AFFECTING THE
GELATIN BINDER, WHICH TENDS TO
SWELL WITH EXPOSURE TO MOISTURE.
THERE'S A VARIETY OF DECK --
TECHNIQUES THAT ARE USED.
LUCKILY THERE'S PHOTOGRAPH
CONSERVATORS THAT WORK IN
INSTITUTIONS THAT CAN HELP WITH
THIS.
>> OKAY.
AND IS IT POSSIBLE TO REVERSE
THE MIRRORING EFFECT --
>> YEAH, NOW, THAT MIRRORING
AGAIN IS SOMETHING THAT IS --
YOU CAN HAVE MIRRORING WHENEVER
YOU HAVE SILVER-BASED IMAGE AND
A BINDER LAYER.
IT'S MORE COMMON WITH GELATIN
BINDERS AND MUCH MORE COMMON
WITH SILVER GELATIN DEVELOPING
OUT PARENTS.
AND THOSE OF YOU WITH DRY PLATE
NEGATIVES MAY HAVE A LOT OF
MIRRORING.
IT'S A MIGRATION OF THE SILVER
IMAGE.
THIS IS THE SILVER IN THE
PHOTOGRAPH THAT IS MIGRATING AND
BEING REDEPOSITED, REDUCED ON
THE TOP SURFACE TO CREATE THAT
REFLECTIVE SHEEN.
THERE ARE TECHNIQUES THAT CAN BE
USED TO MINIMIZE THE MIRRORING
THROUGH WAXING AND OTHER
COATINGS THAT ARE APPLIED.
IT MUST BE DONE BY PHOTOGRAPH
CONSERVATOR BECAUSE IT'S
PROBLEMATIC AND VERY DIFFICULT.
IN SOME SITUATIONS, ONE WOULD
LEAVE THE MIRRORING.
IN OTHER SITUATIONS, IT'S
PROBLEMATIC.
IT MAKES IT DIFFICULT TO REALLY APPRECIATE THE IMAGE.
IT'S SO HIGHLY REFLECTIVE, PARTICULARLY ELIMINATING A LOT
OF THE DETAIL IN THE DARKS.
THERE ARE TECHNIQUES THAT CAN BE USED THAT ARE PHYSICAL AND
CHEMICAL.
BUT AGAIN LIKE SURFACE CLEANING, IT'S SOMETHING THAT SHOULD BE
DONE BY A PHOTOGRAPH CONSERVATOR.

>> GREAT.
AND YOU CAN'T -- ANYTHING CAN'T BE CORRECTED BY ADDING MORE
SILVER OR MORE SALTS TO IT.

>> NO.
THERE ARE ALSO CHEMICAL TECHNIQUES THAT ARE MUCH MORE
AGGRESSIVE THAT CAN BE USED TO REMOVE SILVER MIRRORING.
THERE'S ALL DIFFERENT APPROACHES.
AGAIN, TO SORT OF THINK BACK ON WHAT IS CAUSING IT, YOU KNOW,
THIS IS EXPOSURE TO HIGH RELATIVE HUMIDITY CONDITIONS THAT CAUSES THE GELATIN TO SWELL.
AND THEN POLLUTANTS, CARDBOARD, POOR QUALITY BOXES, POLLUTANTS IN THE AIR ENTER INTO THE GELATIN MATRIX AND BEGIN TO REACT WITH THE SILVER IMAGE. THE SILVER IMAGE IS CONVERTED TO IONS.
THEY MIGRATE TO THE TOP SURFACE AND DEPOSIT THERE.
The difficulty with removing is that it is part of the original object.
YOU REALLY HAVE TO THINK TWICE. SOMETIMES THIS IS A PATINA THAT IS APPRECIATED.
FOR EXAMPLE, I SHOWED YOU EARLIER ON A PHOTOGRAPH.
IT WAS MIRRORED.
THAT WAS ACCEPTED.
AND SO YOU WOULDN'T WANT TO
INTERVENE.
SO YOU NEED TO UNDERSTAND IN
THESE TECHNIQUES, TOO, PART OF
CONSERVATION, IS UNDERSTAND THE
PROCESS, THE DETERIORATION, THE
MATERIALS, ETHICAL PARAMETERS
AND ARTIST INTENT AS WELL.
>> GREAT.
CLAUDIA HAD A QUESTION ABOUT THE
PAPER.
YOU SAY A LOT OF RESEARCH IS
GOING INTO THE DIFFERENT
SUPPORTS.
>> YEAH.
>> SHE WONDERED WHEN THE
DIFFERENT KINDS OF
NONFIBER-BASED PAPER CAME INTO
USE.
SHE'S SEEN SOME MODERN SILVER
PRINTS THAT ARE IN A PLASTIC
SUPPORT.
>> THAT'S A GREAT QUESTION.
YOU BEGIN TO SEE THE
INTRODUCTION OF RESIN COATED
PAPERS IN THE 1960s.
I BELIEVE.
I DON'T KNOW THE EXACT DATE.
BUT DURING THAT TIME PERIOD --
THIS IS SIMPLE A GOOD QUALITY
PAPER SUPPORT THAT IS COATED ON
BOTH SIDES WITH A THIN PLASTIC
LAYER, POLYETHYLENE.
AND IT'S CALLED RESIN COATED
BECAUSE IT'S COATED WITH THIS
THIN PLASTIC LAYER, THIS IS DONE
TO MINIMIZE PROCESSING TIME
BECAUSE YOU COULD WASH AND FIX
THE PAPERS MORE QUICKLY.
DIDN'T ABSORB THE CHEMICALS.
THEY WERE MORE PERMANENT.
YOU COULD GET A HIGHLY
REFLECTIVE SERVICE.
SO YOU BEGAN TO SEE THESE IN THE
60s.
THEY BECAME VERY POPULAR SOON THEREAFTER. SO FIBER BASED PAPER ENTIRELY FIBER BASED PAPER IS EARLY ON. THEN YOU START TO SEE THE INTRODUCTION OF BARYTA PAPER WHERE YOU HAVE THE BARIUM SULFATE AND GELATIN. IN THE 1960s R.C. PAPER, RESIN COATED PAPER. WHAT I SHOULD DO, KRISTEN, IS MOVE TO FINISH UP MY NEXT FEW SLIDES SINCE WE'RE ALMOST OUT OF TIME, RIGHT? >> YES. CAN WE PICK THOSE UP NEXT TIME BY CHANCE? I WAS GOING TO MOVE TO THE HOMEWORK SLIDE. >> YES, WE CAN. ACTUALLY THEY ARE PRETTY MUCH WHAT YOU SEE HERE WITH JUST DIFFERENT IMAGES. SO WE CAN GO AHEAD AND ME HAVE BACK TO THE HOMEWORK SO YOU CAN SHARE THAT WITH EVERYONE AND THEN I CAN PICK IT UP, WHICH WOULD BE A NICE SUMMARY ACTUALLY AT THE START OF THE NEXT WEBINAR. THAT WOULD BE FINE. >> OKAY. THANK YOU. SO EVERYONE, I'VE JUST PULLED OVER TO THE SLIDE THAT DESCRIBES THE HOMEWORK. THE LINK IS COMING UP ON THE SCREEN. COVER UP THIS LOVELY PHOTO. I DID HIT -- THERE'S AN INTERESTING -- >> BY THE WAY, WHAT IS THAT PHOTO? IT'S A CYANOTYPE, RIGHT? IT'S BLUE IN COLOR. >> AND THE HOMEWORK IS TO USE -- FIND SOMETHING IN YOUR
COLLECTION, WHETHER YOUR PERSONAL COLLECTION OR YOUR INSTITUTION'S COLLECTION, THAT YOU MAYBE AREN'T SO SURE ABOUT AND SEE IF THE GRAPHIC ATLAS HELPS YOU OUT AND TELL US MORE ABOUT THE PHOTOGRAPH. AN INTERESTING ASSIGNMENT. AGAIN, IF YOU'RE WATCHING WITH COLLEAGUES TODAY TELL US WHO YOU'RE WATCHING WITH SO WE CAN GIVE YOU CREDIT FOR ATTENDANCE. IF YOU'RE WATCHING, WE KNOW WHO YOU ARE. YOU SHARED YOUR NAME. SO WE DON'T NEED TO HEAR THAT YOU'RE WATCHING. WE'RE GLAD YOU DID. LET'S SEE IF WE CAN GET A QUESTION OR TWO BEFORE WE WRAP UP. I GUESS SARAH PICKED UP ON COLLODION AND HAVING CELLULOSE NITRATE IN IT. IS THAT CORRECT? >> YES. NO, IT'S NOT A HAZARD NECESSARILY. COLLODION IS A FORM OF CELLULOSE NITRATE. WHEN YOU'RE DEALING WITH COLLODION PRINTS, LIKE THE GLOSSY COLLODION PHOTOGRAPH OR THE TINTYPE OR THE AMBROTYPE WHERE COLLODION IS A BINDER, THE LAYER IS SO THIN THAT IT'S REALLY NOT HAZARDOUS. THAT'S A GREAT QUESTION AND A GREAT PREVIEW TO THE NEXT WEBINAR, WHICH WILL FOCUS ON NEGATIVES. WHEN YOU HAVE A CELLULOSE NITRATE FILM NEGATIVE, YOU ARE DEALING WITH MORE CELLULOSE NITRATE AND A DIFFERENT DEGREE. THAT CAN BE A HAZARD. COLLODION AS A BINDER LAYER IS
NOT NECESSARILY HAZARDOUS.
IT IS IMPORTANT TO JUST STEP
BACK, AGAIN, AND THINK WHAT IS
COLLODION.
THAT IS CELLULOSE NITRATE.
WHAT IS ALBUMEN?
THE WHITE OF HENS EGGS.
WHAT IS GELATIN?
A COMMERCIALLY PREPARED PROTEIN.
SO YOU BEGIN TO UNDERSTAND THE
MATERIALS.
>> RIGHT.
AND I JUST -- WE HAD A COUPLE OF
QUESTIONS TODAY ABOUT SLIDES AND
LANTERN SLIDES.
THAT'S COMING UP, CORRECT?
>> YOU KNOW, I WAS REVIEWING
THIS MORNING SOME OF THE
QUESTIONS AND ALSO THE HOMEWORK
AND THE NUMBER YOU ASKED ABOUT,
LANTERN SLIDES.
WHAT WOULD BE HELPFUL TO ME IS
IF A FEW OF YOU WOULD SEND
EXAMPLES OF SOME OF YOUR LANTERN
SLIDES OR OTHER PROBLEMS THAT
YOU'RE HAVING.
I REMEMBER YOU MENTIONED
PANORAMIC PHOTOGRAPHS.
IF YOU SENT IMAGES TO THE DROP
BOX, I WILL PUT THEM INTO THE
TALKS AND SPEAK SORT OF FROM
THOSE IMAGES.
>> AND WILL YOU --
>> GO AHEAD.
>> YOU'LL BE GETTING INTO
STORAGE IN WEBINAR 4.
THINGS LIKE HOW TO KNOW WHEN TO
SEPARATE AN ACIDIC MATTE OR TO
THAT I CAN THINGS OUT OF ACID
DID IT PAPER ALBUMS.
>> YES, I'M GOING TO DO THAT IN
WEBINAR 4.
WHAT I'M THINKING FOR WEBINAR 5,
WHICH I HAVEN'T PUT TOGETHER YET
AND I'M HOLDING OFF ON, IS TO
SEE WHAT THE QUESTIONS ARE.
PART OF WEBINAR 5 WILL PROBABLY
GO INTO THIS IN MORE DETAIL. FOR WEBINAR 5, WHAT WOULD BE GREAT IS FOR YOU ALL TO SEND IMAGES OF SOME OF YOUR STORAGE QUESTIONS AND PROBLEMS AND WE'LL RUN THROUGH THEM AND SAY IN THIS CASE, YOU MIGHT DO THIS OR THAT. MUCH THE SAME WAY I WOULD DO IF I HAD YOU IN AN AUDITORIUM BECAUSE I’D HAVE YOUR IMAGES. SO THAT’S A BIG ISSUE. WE’LL TALK ABOUT IT IN 4 AND HOPEFULLY A BIT IN 5 AS WELL.

>> GREAT.

KRISTEN --

>> WE’VE SHARED -- HERITAGE PRESERVATION HAS A G MAIL ACCOUNT. THAT CAN HANDLE BIG ACCOUNTS. SO HERITAGEPRESERVATIONDC@GMAIL.COM. WE JUST SHARED THAT IN A CHAT. OR IF YOU WANT TO SEND US AN E-MAIL INFO@HERITAGEPRESERVATION, WE CAN FIGURE OUT HOW TO GET LARGER FILES TO US.

>> I KNOW WE'RE OUT OF TIME. BUT I WANTED TO THANK HEATHER FOR BEING ONLINE AND ANSWERING THESE QUESTIONS. YOU ALL MADE BE INTERESTED TO KNOW, HEATHER IS FINISHING UP HER SECOND YEAR OF STUDY IN OUR THREE-YEAR PROGRAM. GRETA IS FINISHING HER THIRD YEAR. BOTH HAVE BEEN VERY INVOLVED IN THE DEVELOPMENT OF THIS WEBINAR. FOR HELP, THIS IS PART OF HER FINAL EXAM THIS SEMESTER. THIS IS A GREAT OPPORTUNITY FOR HER TO RESPOND IN REAL TIME TO A WIDE VARIETY OF QUESTIONS AND PROBLEMS. THANK YOU FOR YOUR GOOD
QUESTIONS THROUGHOUT THIS
WEBINAR AS WELL.
>> GREAT.
WE'RE AT 2:33.
SO WE'RE GOING TO LET YOU GET
BACK TO WORK AND THANK YOU SO
MUCH FOR ATTENDING.
AGAIN, LOOK FOR OUR E-MAIL WITH
LINKS TO COME LATER TODAY AND
CHECK THE COURSE PAGE FOR
ADDITIONAL INFORMATION AS WELL.
>> I'M LAUGHING BECAUSE SOMEONE
SAID WE SHOULD GIVE HER AN A.
>> OKAY.
>> THANK YOU GUYS.
>> IT'S BEEN FUN.
DON'T FORGET, NEXT TIME WE'RE AT
A DIFFERENT TIME.
ON THE 16th, I THINK.
>> YEAH.
THE NEXT CLASS IS THURSDAY MAY
16th AT 3:00 P.M. EASTERN TIME.
SORRY TO YOU FOLKS IN EUROPE WHO
ARE MAKING YOU STAY UP EVEN
LATER THAN YOU ALREADY DO.
WE REALLY APPRECIATE YOUR
PARTICIPATION.
THANKS AGAIN.
HAVE A GOOD DAY.
>> THANK YOU GUYS.