

8 Blunders People Make When They Scan Photographs

*... And How to
Avoid Them*

By
Sally J. Jacobs
"The Practical Archivist"

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About the author: Sally J. Jacobs has a Master’s Degree in Library Science with a Specialization in Archives Management. She has been an archivist since 1998, and has had the pleasure of working on collections housed at the Library of Congress and the Wisconsin Historical Society, among others. Prior to starting her own archival consulting business in 2004 she worked as Assistant Corporate Archivist and Historical Image Researcher for American Girl.

Free Information: As part of her mission to “deputize” family archivists, Sally provides accurate, reliable archiving information at no charge. Sign up for her monthly “Ask the Archivist” e-zine (subscription is free) and Sally will deliver articles to your email account once a month. Visit her website [www.jacobsarchival.com] to subscribe, and while you’re there be sure to check out all the free archiving information and handy preservation kits.

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8 Common Blunders People Make When They Scan Photographs *...And How to Avoid Them*

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- Blunder #1:
Scanning photos more than one time.
- Blunder #2:
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- Blunder #8:
Never scanning at all.

Blunder #1: Scanning photos more than once.

Most of us are aware of the damaging effects of Ultra Violet (UV) light, especially fading. Here are two very important things you need to know about light damage:

- (1) It is cumulative. Each exposure to light reduces the time left before the item becomes faded.
- (2) It is irreversible. I have a photographer friend who put her favorite print in her darkroom to reduce exposure. That was years ago, and even though it's in the dark almost all the time, she can see that it's still fading...

The light used by a scanner is very bright. Practically speaking, it has to be bright in order to get a clear scan.

Common sense says that putting a photograph centimeters away from an intense burst of light (even if the length of exposure time is brief) has the potential to cause damage.

Does this mean you should never scan? Of course not. But it does mean that photographs should be exposed to the light from scanners and photocopiers as little as possible.

The great thing about scans is that you can generate new digital copies and new prints from a single digital master. In other words, if you've got a halfway decent file retrieval plan you will never have to scan that photograph again.

And even better, the original can be placed in a dark box in a dark closet while the new copy is displayed on the wall.

Blunder #2: Damaging photos while scanning.

As a “deputized” family archivist, I expect you to follow the rules of safe handling:

Absolutely no food or drinks on the work surface. If you need to have water handy, please please please keep it on the floor at your feet. One spill and your irreplaceable treasures can be ruined.

Cover your work-in-progress. This is important if you are going to leave your project out on a table for any length of time. Use opened folders or a large piece of cardboard. It will prevent damage caused by knocking, blowing, and dropping of who-knows-what.

Wear gloves. It’s the simplest way to keep oils and salts from your fingers away from photographs. You might not see today’s fingerprints yet...but they will acidify over time and show up as a stain. If gloves are a problem, be sure to wash your hands before working, and skip the hand lotion. If you get up to answer the phone or any other task, remember to wash your hands again before you sit down to work.

Support fragile and larger prints very carefully. Use two hands. If the item is oversized, enlist the help of a friend. Very fragile items should be digitized using a digital camera rather than a scanner.

Never use an automatic feeder for photographs. These are OK for research notes and other office papers, but dragging a print across glass is a sure-fire way to scratch the emulsion. And don’t even get me started on misfeeds and jams. *Ouch!* I fell a little nauseous just thinking about an heirloom print getting caught in one of those.

Blunder #3: Scanning at the wrong resolution.

True confession time...

This one had me stumped for a long time. That is, until I realized that the correct resolution requires two separate pieces of information. In other words, it's a "two-parter."

Part 1: To get a decent print that doesn't look "pixilated" you need a resolution of 300 dpi. That's dots per inch. It's the resolution your printer creates.

Part 2: That 300 dpi recommendation only applies when you don't need to enlarge the print size at all.

The full recommendation is: "300 dpi @ 100%"

If you are scanning a 3.5 x 5 inch photograph and you want to print it out so it's 5 x 7 inches, you'll need to bump up the resolution to 429 dpi.

For a handy resolution calculator, visit:

<http://www.scantips.com/cgi-bin/calc.cgi>

PPI vs. DPI: Dots per inch (dpi) is the resolution your printer creates. Pixels per inch (ppi) only applies to photos viewed on screen. A computer screen gives you 72 dpi.

If you want to print out copies of your scan that don't have visible squares (pixels), you need to scan at 300 dpi minimum. The digital lab at the Wisconsin Historical Society uses 400 dpi as their minimum.

Blunder #4: Saving in the wrong file format.

This may be the worst blunder on the list. Over and over I see people cringe in my workshops and free talks when they realize they are going to have to re-scan everything they've already done.

THE MOST IMPORTANT TIP IN THIS BOOKLET:

For each scan, save an archival master as a TIFF file.

Do not edit this master. Do not mess about with contrast changes or erasing scratches. Create a copy of the master and change it however you wish.

TIFF files are uncompressed, which means they take up more storage space than JPEG files, but trust me on this one.

JPEG uses what's called a "lossy" compression to create a smaller file size. Basically, what this means in a photo with blue sky the compression algorithm says "the next 50 pixels are all blue." This allows a single bit of information to describe 50 pixels instead of one pixel.

The problem is that each time you uncompress it for editing and re-compress it to save your changes, you lose data. Hence the oh-so-technical term "lossy."

Use the archival master to create smaller JPEG files. These are the ones you can upload to the web or email to friends and family. You should also use archival masters to create whatever format your genealogy software requires.

Blunder #5: Not backing up your work.

Accidents happen. Hard drives fail. We all know at least one person who has lost data this way.

This one is painfully obvious, but you'd be amazed by how many people skip this step.



Blunder #6: Backing up your work only to CD.

If you are planning to scan an entire collection of historical family photographs, you should seriously consider investing in an external hard drive. Especially if you are going to be a responsible family archivist and save digital master files as uncompressed TIFFs.

You can purchase a 200 GB drive for about \$140 on Amazon.com. It will store as much information as 500 Gold CDs -- which would cost you at least \$500 (and that's without jewel cases!)

CDs are the most common choice, but they can start to fail in as little as 5 years. If you decide to use CDs as your backup, be sure to read the last two articles in this booklet:

- **More Digital Archiving Tips**
- **Practical Tips on CD Care**

Blunder #7: Scanning without a plan.

Family photo collections can be quite large. Especially if you are the person to whom photographs tend to gravitate. Nobody knows this better than a genealogist.

There are some things you need to plan before you start a large scanning project.

What to scan. Organize your collection and make priorities for scanning.

Where and how to store the digital files. Digital archiving is more complicated than the old fashioned kind. Unfortunately, the days of tossing photos in a box and forgetting about them are over. You will need to check your digital files (especially CDs) every few years to make sure they still work.

File names. This one will really getcha if you ignore it. To be safe, you only have 8 spaces to describe your new digital photograph, plus the 3 spaces after the dot for the file type.

I recommend starting with a date code. That way, sorting by file name will automatically sort chronologically at the same time. I use a 3 number date code with “1” for 1900s and “2” for 2000 and beyond. After that, a family name code, or even an individual code if you have already creating this kind of indexing system. The last 3 spaces are for a brief description. GRP for a group portrait, for example.

A 1919 photograph of the McConnell family would get a file name like this: **119MCCgrp.tif**

And a 2006 photograph of the Jacobs family would get a file name like this: **206JACgrp.tif**

Blunder #8: Never scanning at all.

Although I have some strong cautions about scanning and digital archiving, by no means am I “anti-digital.”

I have seen with my very own eyes the miracles that are possible with digital restoration. Photographs that were cracked with pieces missing transformed into a lovely portrait anyone would be happy to hang on their wall.

Here is my advice to you as you navigate the exciting and challenging world of digitization:

SCAN YOUR PRINTS AND PRINT YOUR SCANS

Here's why:

1. The more copies there are, the more likely an image will survive for decades to come.
2. Black and White prints will easily outlast any digital copy. Color prints from a trusted photo developer also have a good chance of outlasting the digital copy.

More Digital Archiving Tips from

"The Practical Archivist"

With a little knowledge and a little encouragement, you will be able to extend the life of your digital memories...and you don't have to be a computer whiz to do it.

1. Don't cheap out.

Independent testing reveals the cold, hard truth: cheap CDs flake out more often than high quality CDs.

One study revealed that the quality of discs from experienced manufacturers like Mitsui, Taiyo Yuden, TDK, Kodak, Denon, and Verbatim improved over time.

The first round of tests showed a 30% failure rate from these manufacturers. Two years later, that failure rate had dropped to 13%.

In contrast, cheap CDs from manufacturers like Mega Media and Ritec had an alarming increase in failure rates: from 33% to 60%.

Whoa!

2. Smaller is better.

The more information you cram onto a disc, the more likely it is to fail. The independent testing I just mentioned discovered a 0% failure rate for 63 minute discs manufactured by Mitsui and TDK. None of the 74 or 80 minute discs had such a low failure rate...even from the same manufacturers.

Again, don't cheap out. Less information storage per disc means you'll have to buy more, but if the cheaper one fails...the money you spent is wasted anyway.

3. Gold standard.

The dye formulation used in a CD is an important factor in its long-term performance. When the dye layer degrades, the disc becomes unreadable. You want the kind of dye that will last as long as possible.

For my clients as well as my own collection, I use Mitsui Gold for any CD that needs to last a good long time. I take my cue from the Wisconsin Historical Society.

Mitsui Gold CDs use a **Phthalocyanine** (thal-o-sy-a-nene) dye. The non-label side looks gold with a slight greenish tint.

Is gold an absolute guarantee that it will last? I won't lie to you...it's not a 100% guarantee. But if you are buying a gold CD from a reputable dealer, it's certain that you are getting a quality product.

Ideally, you should burn TWO identical sets of discs, one on gold CD and one silver from a quality vendor. Think of it as betting on both red and black in roulette. Either way, you can't lose.

4. Protect BOTH sides.

Most people protect the play side of their discs (the "bottom") and don't think about the label side at all. Big mistake! The protective layer of plastic is thinner on the label side than on the bottom.

And just below that protective layer on top of your disc is the precious dye layer, which is where all of your data is stored.

Scratch the top, and you've got a serious problem.

A scratch on the label side could puncture the data layer, causing irreversible damage to your disc. For advice on how to take care of your CD, please see Practical Tips for CD Care. (It's the final article in this booklet.)

5. Recordable CDs (CD-Rs) are not your only storage choice.

If you are planning to scan an entire collection of historical family photographs, you should seriously consider investing in an external hard drive.

I have a Maxtor and I love it. You can purchase a 200 GB drive for about \$140 on Amazon.com. It will store as much information as 500 Gold CDs -- which would cost you at least \$500 (and that's without jewel cases!)

Practical Tips on CD Care from

"The Practical Archivist"

- 1. Make multiple copies.** Digital copies are cheap! Take advantage of this fact and burn a second set of CDs. Ask a relative to store them away from your other copies. This is in case of fire, flood, or other disaster. You can also store additional backup copies on a remote server. The more copies there are, the more likely any given image will survive.
- 2. Protect the top and bottom from scratches.** That means storing CDs in jewel cases with a central hub. Avoid storing important CDs in a sleeve or envelope because every time you remove it, you risk scratches.
- 3. Never write on the top of a CD with a regular pen.** This can also cause scratching. The safest way to label a CD is to write with a felt-tipped marker on the round space in the center of the disc. There's not a lot of room in this area, so I recommend you number your CDs and record that number on the CD itself.
- 4. Never touch the surface of a CD.** Gloves are a great idea, too. The oils on your fingers and hands contain salts and acids that are not good for CDs.
- 5. Store your CDs away from light, heat, and dust.** All of these factors can cause damage. A box with a lid is a great option.
- 6. Leave unused CDs shrink-wrapped until you are ready to record one.** This is the safest place for them to be.

Do any of these statements sound familiar?

• **I am the keeper of my family history.** Somehow, photographs and mementos tend to gravitate toward your house, and you take your role as caretaker very seriously. *The thought of future generations enjoying these treasures makes your heart smile.*

• **I can't bear the possibility of losing my treasures and I want to protect them from disaster.** Hurricanes, tornados, flooding and fire. Lately we've all been reminded that our photographs and cherished mementos are just one event away from total destruction. *Is there any way to prevent a total loss?* Of course there is, and it's forehead-slappingly simple: Extra copies. Read more about our digital solutions on our website

• **I inherited valuable family treasures and I'm not sure how to take proper care of them.** If you are serious about your new role as caretaker, I strongly encourage you to visit our Free Information page. It has links to reliable information that will help you take the best possible care of your collection. And sign up for our free newsletter, too -- it delivers tips and advice to your in-box once a month.

If any of these situations sound familiar, you could probably use our help. Why don't you stop by our website and see what you've been missing. We've got tons of **free reliable information** just waiting for you!



Our business is saving memories.

Phone: 608-332-1494

Email: sally@jacobsarchival.com

Web: www.jacobsarchival.com

