The SEVEN DEADLY SINS *of* DIGITIZING PHOTOS

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INTRODUCTION

Every day, we come across digital images that have been improperly digitized or improperly handled. The damage to these images may be unrecoverable, *especially* if original prints or slides no longer exist. Learning the best practices for handling digital images is crucial in making sure images will be preserved for the future.

PREPARING TO CREATE A DIGITAL ARCHIVE

- **What will these images be used for?**
  In this day and age, some photos aren't meant to live forever, like the pic of your delicious breakfast you just posted on "snapgram." But for photos that are worth keeping, make sure you follow these standards so your photos will outlive you.
- **Creating a "digital negative" or "gold plate" standard for digitizing**
  When scanning a photo/negative/slide *or* capturing a digital photo on a camera or device, make sure you get a large, high-quality capture in the first place. This high-quality file will be your digital negative that you store safely away, making copies for daily use.
- **Options and resources for proper archival digitization**
  If you have a lot of old photos and documents to scan, consider getting help from professionals or volunteer resources such as family history libraries or genealogy associations. They can save you a lot of time *and* help ensure the job gets done properly.

THE SEVEN DEADLY SINS OF IMPROPER DIGITIZATION (AND HOW TO AVOID THEM)

1 *LOW RESOLUTION!* (Make sure you get enough pixels.)

A photo that will be printed needs *four times as many pixels* to look good as one that will appear on a screen.

a. Rule of thumb: scan at a ***minimum of 300 ppi***/dpi (pixels per inch). If you will ever want to crop or enlarge the photo, scan at 600 ppi. When in doubt, choose 600. (Unless you are scanning a tiny photo that you want to enlarge, scanning above 600-800 ppi is not recommended. If your files are unnecessarily large, they will take up too much space and slow your computer.) 35 mm slides should be scanned at 3200 ppi, since their surface area is much smaller.

b. Archive/store your camera or device photos at their original resolution when downloading or uploading from your device.

2 *HIGH COMPRESSION!* (Avoid JPEG "smooshing" where possible.)

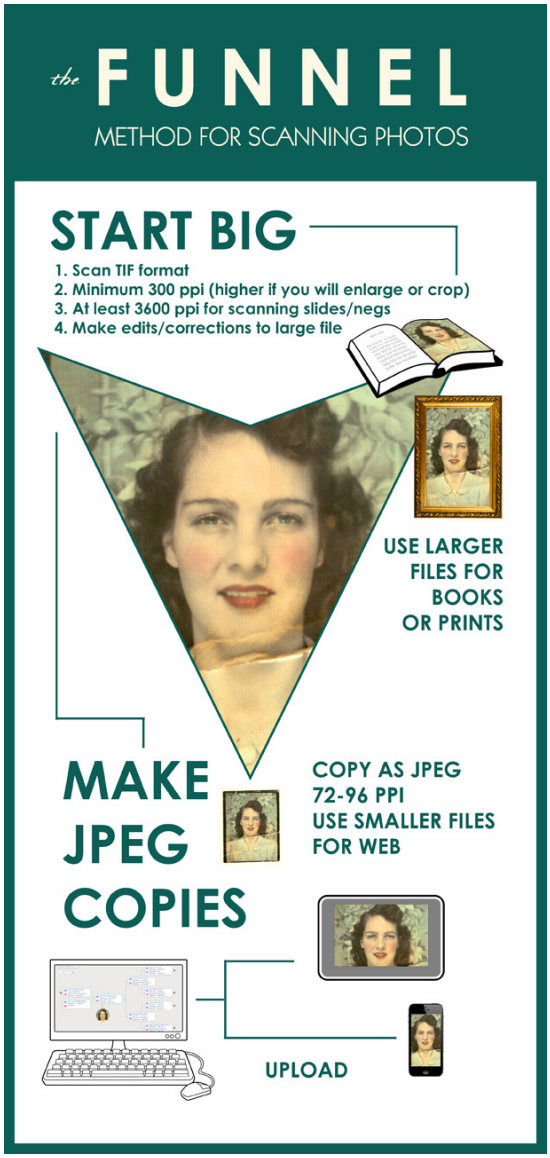
Jpeg or (.jpg) is the most common file type used today. But it's not the best option for creating a digital archive of your important photos. Jpegs are "compressed" to save space, which makes them upload faster to websites. But compression throws away important digital data and can permanently damage your photos if you're not careful. Overcompression causes visible "artifacts" (those blocky, distorted pixels with funny color shifts that you can see when you print or zoom in on screen—we've all seen them, right?!). To avoid compression when creating your digital negative:

a. When scanning, set your scanner to save as a .tiff (which uses "lossless" compression) instead of a .jpeg if possible.

b. If you must scan as a jpeg, find the advanced settings in your scanner and set the quality level to the highest possible. (Least amount of compression.)

c. Don't edit a jpeg photo. Repeated editing will compress the file further each time it is saved, which can cause damage. Do your editing in a .tif or .psd (Photoshop) format.

d. Use the "funnel method" of handling digital photos (see infographic at right). Scan/capture large and make smaller copies for uploading or web use.



3 *WRONG FILE FORMAT!* (Learn what format is best for what purpose.)

So many different file formats are available! How do you know which ones to use when digitizing?

TIFF - gold standard for scanning photos

RAW - gold standard for capturing photos on a digital camera

JPEG - if used properly, best for uploading to websites and emailing

PDF - use to scan *only* typed documents that will not need photo editing, especially multi-

page documents like books. Anything else (including census records, certificates, etc.), scan as a photo (preferably tiff) so you can adjust or edit if needed.

PNG, BMP, GIF, EPS and other file types have their legitimate uses but should be avoided when scanning or capturing.

4 *NO IDENTIFICATION!* (Use metadata to identify images).

Digital devices capture metadata each time you take a photo: date, time, location, exposure, etc. But did you know you can also add metadata: attach captions, contact information, and other identifying information to a digital photo which will *travel with the photo* when copying, sharing or uploading? You can add metadata with Adobe programs such as Photoshop, Bridge, or Lightroom, or many other metadata editing apps available. [Look for a program that will allow you to edit XMP (user-entered) data, not just EXIF (device capture] data.)

5 *BAD STORAGE!* (Organize and upload images; take proper care of media.)

There is nothing more painful than losing precious family memories due to a hard drive failure! Redundancy (see #7) is the key. Here are some things that can go wrong:

a. Disk degradation and drive failures. CDs, DVDs, flash drives, and hard drives are all prone to breakage, failure, or corruption. Make sure you label and safely store hard material, keeping it away from heat and light.

b. Theft/loss. Upload camera/device images right away to another location or use an automatic backup app. Don't leave months of photos to languish on your camera.

c. Business fails. When choosing a cloud storage option, make sure you use a large, reputable company that isn't likely to go out of business. Better yet, use multiple sites. Make sure you know how to download as well as upload your data.

d. Disorganization. How will you or anyone be able to find and enjoy your photos? Having a simple organizational system and keeping it current is important. You can use photo library software or create your own hierarchy of file folders that makes sense to you: by year, decade, event, etc.

6 *INCORRECT TRANSFER!* (Learn how to upload/send full-resolution images.)

Now that you have created your digital negatives, make sure they stay in pristine condition when you share, move, or upload your files.

a. Emailing photos: if the recipient with needs a high-quality file, make sure to add the photo as an attachment, and choose "original file size" when emailing from a device.

b. If uploading to cloud storage, find out if the service you use compresses your photos.

c. When uploading a photo to a genealogy or family website, upload the largest file size the site will allow. This will ensure that the photo will be useful for others.

7 *NO REDUNDANCY!* (Backup and share.)

You've gone to a lot of trouble to save your photos. Now make sure that you've saved them in multiple ways in case one fails!

a. Use the **3-2-1 rule** to keep your images safe: **3 different places = 2 hard storage + 1 cloud storage.** Hard storage would be discs, flash media, hard drives. As technology changes and cloud storage is easier and cheaper, you may keep only one copy in hard storage and two copies in different cloud storage sites, as long as it is easily and quickly retrievable.

b. Keep up with technology and convert to newer formats as they come along. Digital files, if properly handled, won't degrade in quality (like a photocopy of a photocopy—or VHS to CD).

c. Don't be greedy! Sharing your images widely is the best protection. Give copies to family members and post to genealogy websites.

OPTIONS FOR CREATING AND SHARING YOUR DIGITAL ARCHIVE

- Create an archive index (book or digital) with attached storage and give to family.
- Donate copies of your archive to organizations.
- Share your images on genealogy & family websites.
- Share your cloud files with trusted friends & family.